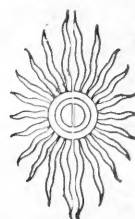


S419

.H/2

Philip Henry Hale, ed.
HALE'S HISTORY
— OF —
AGRICULTURE
BY DATES.



A SIMPLE RECORD OF
HISTORICAL EVENTS and
VICTORIES OF PEACEFUL INDUSTRIES.

PUBLISHED IN CONNECTION WITH

The National Farmer ♦
♦ and Stock Grower,
WHICH IS ISSUED MONTHLY AT ST. LOUIS, MO.



PUBLISHED BY THE HALE PUBLISHING CO.,
3550 VISTA AVE., ST. LOUIS, MO.

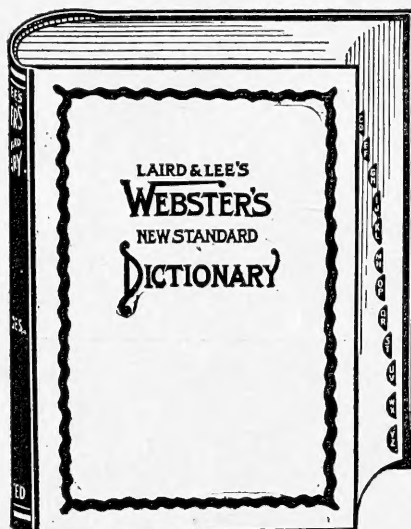
FIFTH EDITION—JULY, 1915.

Greatest Value Ever Offered For \$1.00

THE VERY BEST MONTHLY FARM PAPER FOR TWO
YEARS AND A COPY OF LAIRD & LEE'S

WEBSTER'S NEW STANDARD DICTIONARY

WHICH IS THE MOST COMPACT, USEFUL, HANDY, IN-
STRUCTIVE BOOK EVER ISSUED BY THE AMERICAN PRESS.



L LAIRD & LEE'S Webster's New Standard Dictionary of the English Language — a wonderful book, 756 pages in all, 840 illustrations, substantially bound, gilt title, red edges, patent thumb index. Special edition for office and general use on farms, estates, ranches, etc.; massive but handy; contains ten encyclopedic features, supplement of new words, dictionaries of biography, geography, musical terms, Biblical, classical, historical and mythological names, foreign phrases, English word-building, rules in orthography, current abbreviations, metric system with conversion tables; weighs twenty-eight ounces. We are using WEBSTER'S NEW STAND-

ARD DICTIONARY as a subscription premium to the best monthly farm paper in the United States.

The National Farmer and Stock Grower

is a nice, clean, general farm publication, full of practical, interesting and instructive information. It contains good reading for all the family. It is very useful to general farmers, to dairymen, to vegetable and fruit growers, and especially so to cattle, hog and sheep raisers and feeders, to horse and mule raisers and dealers, and it contains more good poultry facts than most of the poultry papers. The best live stock illustrations appear in THE NATIONAL FARMER AND STOCK GROWER. There are thirty-two pages, four columns to the page. It is published monthly.

SPECIAL INDUCEMENTS.

Our offer to you: Send us One Dollar and we will send you THE NATIONAL FARMER AND STOCK GROWER for two years, and we will also send you, postage paid, safe delivery guaranteed, one copy of this great WEBSTER'S DICTIONARY. We also agree to refund money and pay return postage to anyone who is not satisfied with the bargain. Address,

THE HALE PUBLISHING CO., 3550 Vista Ave., St. Louis, Mo.

S419
H2

3
3 673
3 3
3 3
3 3

Copyright, 1915,
by
THE HALE PUBLISHING CO.,
3550 Vista Ave.,
ST. LOUIS, MO.

\$0.50

©CLA401645

No. 1



Mr. PHILIP H. HALE,
Editor and Compiler
History of Agriculture by Dates.

PREFACE.

...HALE'S...

HISTORY OF AGRICULTURE BY DATES.

THIS is the multiplication of brief items relating to the Live Stock and Agricultural History of the World. The intention was to make a short but interesting list of items without publishing a volume of any size.

In the attempt to grow a little unimportant shrubbery we accidentally planted a Tree of Knowledge, which, having lived and borne fruit for four successive editions, is destined to become the great and lasting historical record of the Peaceful Industries of Humanity.

We have no apology to offer for the scraps of information which are presented in the book. Two-thirds of the items appearing in The History of Agriculture by Dates occurred during the lifetime of the editor and were recorded in the current news and literature of the day. The earlier items are found in so many different compilations that the original source of many facts of history contained in this book is unknown.

This is the edition of 1915. It is not complete, but is a useful and interesting book of reference. Use it freely. A better edition will be issued later.

Respectfully submitted by

Philip H. Hale
EDITOR AND COMPILER.

JUL -6 1915

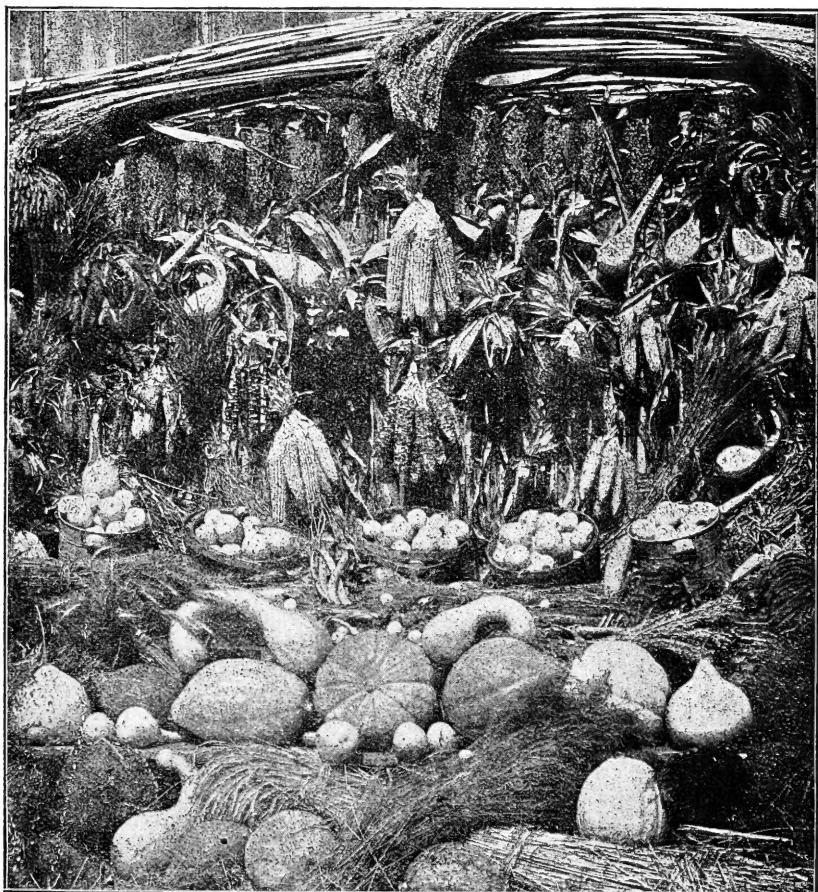
HALE'S

HISTORY OF AGRICULTURE

BY DATES.

EDITED BY PHILIP H. HALE—COPYRIGHT BY THE HALE PUBLISHING CO.

“If History without Chronology is dark and confused, Chronology without History is dry and insipid.”—A. HOLMES.



“THE EARTH AND THE FULLNESS THEREOF.”

A variety of products from an ordinary farm in the center of the United States.

SCRIPTURAL QUOTATIONS.

And God said: "Let there be light;" and there was light. The creation of the world.

"And God made the beast of the earth after His kind and cattle after kind, and everything that creepeth upon the earth after His kind, and God saw that it was good."

And God said: "Let the earth bring forth grass, the herb yielding seed and the fruit tree yielding fruit after His kind, whose seed is in itself, upon the earth;" and it was so.

"God made the earth and the heavens. And every plant of the field before it was in the earth, and every herb of the field before it grew, for the Lord had not caused it to rain upon the earth and there was not a man to till the ground."

Year.

4241 B. C.—Egyptian astronomers of the Nile Delta gave to mankind the calendar which divides the year into 365 days. Also first recorded date in the history of the world.

4004 B. C.—"Therefore the Lord God sent him (Adam) forth from the garden of Eden to till the ground, from whence he was taken."

4004 B. C.—"Thorns also and thistles shall it bring forth to thee, and thou shalt eat the herbs of the field."

4003 B. C.—"Abel was a keeper of sheep and Cain was a tiller of the ground."

3875 B. C.—"And Adah bare Jabal; he was the father of such as dwell in tents and have cattle."

3500 B. C.—According to archaeologists, horses were domesticated in Babylonia and the country now known as Asia Minor at a very early period. Actual date is uncertain within a few hundred years, and the information is obtained from the characters appearing on the ruins of ancient buildings.

2700 B. C.—At this early day certain cereal and forage grasses now classed as millets formed one of the chief sources of food in China. The Chinese also claim that wheat was used as food by them at the same period as a direct gift from Heaven.

2349 B. C.—"And the rain was upon the earth forty days and forty nights."

2349 B. C.—According to the Scriptures, Noah entered the ark, taking with him of clean beasts, by sevens, the male and the female, and of beasts that are unclean, by twos, the male and his female, and the fowls of the air, by sevens, the male and the female.

2348 B. C.—"Neither shall all flesh be cut off any more by the waters of a flood; neither shall there any more be a flood to destroy the earth."

2348 B. C.—"While the earth remaineth, seed time and harvest, and cold and heat, summer and winter, day and night, shall not cease."

2000 B. C.—The Date Palm had already become a well-known fruit tree at this time.

2000 to 1400 B. C.—Hindoos interested in cattle raising valued their cows according to the yield of butter.

1918 B. C.—"And Abraham was very rich in cattle, in silver and in gold."

1918 B. C.—The land could not support the immense flocks and herds of Abraham and Lot, therefore they separated. Then Abraham said unto Lot: "Let there be no strife between thy herdsmen and my herdsmen. If thou wilt take the left hand, then I will go to the right. If thou wilt go to the right I will go to the left."

1898 B. C.—Abimilech gave many valuable presents to Abraham, such as oxen, she-asses and he-asses, but no mention is made of horses or swine.

1804 B. C.—"Then Isaac sowed in that land and received in the same year an hundred fold."

1747 B. C.—"And Reuben went in the days of wheat harvest and found mandrakes in the field and brought them unto his mother Leah."

1746 B. C.—Jacob was the first to recognize live stock breeding as a possibility.

He bred streaked, speckled and spotted cattle and mated the strong with the strong for his own purposes. He also made the first known contract for running stock on shares, which resulted in his getting the best and largest share.

1715 B. C.—Commencement of the seven years of abundance in Egypt, followed by seven-years' famine, as foretold by Joseph to Pharaoh. "And Joseph gathered corn as the sand of the sea, very much, until he left numbering; for it was without number."

1700 B. C.—Joseph gave the Egyptians bread in exchange for horses. First mention of the horse in the Scriptures.

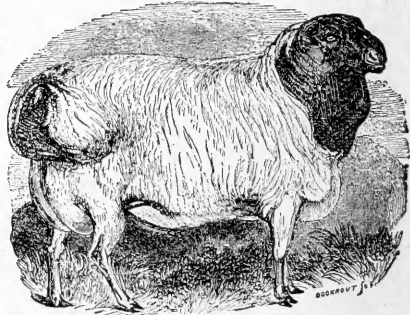
1500 B. C.—A tomb in Egypt probably built about this time bears a painting which shows the various operations connected with harvesting the grain.

1491 B. C.—"And the flax and the barley was smitten, for the barley was in the ear and the flax was balled. But the wheat and rye were not smitten, for they were not grown up."

1490 B. C.—"And every oblation of thy meat offering shalt thou season with salt. * * * With all thine offerings thou shalt offer salt."

1471 B. C.—"Speak unto the children of Israel that they bring thee a red heifer without spot, wherein is no blemish and upon which never came yoke."

1451 B. C.—"A land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of oil olive and honey."



FAT-RUMPED SHEEP. — According to the earliest authentic accounts, the flocks of the patriarchal shepherds were of the fat-rumped breed. This is particularly an Asiatic sheep and found in Palestine in larger numbers than any other breed. It is also found in purest strain in the great Tartary of Russia. It is known as the largest breed of the unimproved sheep. The illustration is from a book entitled "The American Shepherd," edited in 1843 by L. A. Morrell. Several other illustrations are from the same volume.

1450 B. C.—Thothmes, III., greatest of the Egyptian kings, left a papyrus record of his contest of Mesopotamia, in Asia, and priding himself upon obtaining the racing horse and introducing him into Egypt.

1400 B. C.—Fowls, the oldest recorded of our domestic animals, were introduced into China about this time. An ancient Chinese authority says: "Fowls are creatures of the West." The common fowl is supposed to have sprung from the wild jungle cock in the East Indies.

1312 B. C.—"And Boaz said unto Ruth: "At mealtime come thou hither and eat of the bread and dip thy morsel in the vinegar; and she sat beside the reapers and he reached her parched corn."

1193 B. C.—"To Helen in the Palace, weaving there an ample web, a shining double robe, whereon were many conflicts fairly wrought."—Quotation from the Siege of Troy.

1184 B. C.—"Endured by the horse-taming sons of Troy."—Quotation from the Trojan War.

1030 B. C.—Then all the king's sons arose and every man gat him upon his mule and fled.

1030 B. C.—"And it came to pass that after two full years Absalom had sheep shearers in Baalhazor."

1020 B. C.—King David of Israel was a great ranchman, as evidenced by his own words: "For every beast of the forest is mine and cattle upon a thousand hills."

1015 B. C.—King David said: "Take with you the servants of your Lord and cause Solomon, my son, to ride upon mine own mule."

1014 B. C.—"And Solomon had forty thousand stalls of horses for his chariots and twelve thousand horsemen; barley, also, and straw for their horses, and dromedaries brought they also into the place where the officers were."

1014 B. C.—"And Solomon's provisions for one day was thirty measures of fine flour and three score measures of fine meal, ten fat oxen and twenty oxen out of the pastures and an hundred sheep, besides harts, roebucks, fallow deer and fatted fowl." King Solomon's life records the first stalled cattle and fatted poultry.

1000 B. C.—"Better a dinner of herbs where love is than a stalled ox and hatred therewith." From the Proverbs of Solomon.

992 B. C.—"And Solomon had horses brought up out of Egypt and the king's merchants received linen yarn at a price."

906 B. C.—And Ahale said unto Obadiah: "Go into the land until all the fountains of water and unto all brooks; peradventure we may find grass to save the horses and mules alive that we lose not all the beasts."

900 B. C.—The poet Homer flourished about this time. In his *Odyssey* he says: "He next betakes him to his evening cares. And, sitting down, to milk his ewes prepares; Of half their udders eases first the dams. Then to their mothers' teats submits the lambs."

Half the white stream to hardening cheese he pressed

And high in wicker baskets heaped; the rest,

Reserved in bowls, supplied the mighty feast."

896 B. C.—"And Mesha, King of Moab, was a sheepmaster and rendered unto the King of Israel one hundred thousand lambs and an hundred thousand rams with the wool."

753 B. C.—This is the year in which Rome was founded by Romulus.

725 B. C.—"Doth the plowman plow all day to sow? Doth he open and break the clods of his ground? When he hath made plain the face thereof, doth he not cast abroad the fitches and scatter the cummin and cast in the principal wheat and the appointed barley and the rie in their places?"

725 B. C.—"For his God doth instruct him to discretion and doth teach him: "For the fitches are not threshed with a threshing instrument, neither is a cartwheel turned about the cummin, but the fitches are beaten out with a staff and the cummin with a rod."

708 B. C.—The Grecian colony of Tarentine, in Italy, established a breed of fine-wool sheep, imported there from Asia Minor.

680 B. C.—The horse was introduced into the arena by the Greeks in the twenty-third Olympiad and the birth of horse racing may be fixed at this time. In the beginning the horses were ridden and the contests were over a distance of four miles; later, in the twenty-fifth Olympiad, chariots were introduced.

600 B. C.—At this time Angora goats were known to exist at Angora, Asia Minor.

595 B. C.—"Take thou also unto thee millet and fitches, and put them in one vessel and make thee bread thereof."

550 B. C.—Cincinnatus Roman patrician, called from his farm to the dictatorship of Rome in order to save the state. He succeeded in bringing peace to his country, and then returned to his farm.

510 B. C.—Darius, one of the Persian Chiefs, who had succeeded in detroning the usurper, the false Smerdis, was elected King of Persia. The Chiefs agreed to meet early one morning on horseback and to bestow the crown upon the one whose horse neighed first after sunrise. It appears that the groom of Darius, apprised of this project, led his master's horse in the night with a mare to the appointed place, and in consequence of this stratagem the horse of Darius neighed loud and long when the Chiefs were assembled. Darius was then saluted as King, and the choice was approved by the people.

500 B. C.—"For he hath given you rain moderately. * * * And the floors shall be full of wheat and the fats shall overflow with wine and oil."

495 B. C.—Job was a large stock owner. "His substance was 7,000 sheep, 3,000 camels, 500 yoke of oxen and 500 she asses."

480 B. C.—The battle of Thermopylae between the Greeks and the Persians was fought in this year.

460 B. C.—Hippocrates knew something of the movement of the blood.

450 B. C.—Butter used by the Scythians, the people inhabiting the country near the Black and Caspian seas.

400 B. C.—About this year Xenophon, a Greek historian and soldier, wrote a description of a good horse and giving instructions how one may be the least deceived in the purchase of horses.



THE FAT-TAILED SHEEP is considered as a Persian production. This is a pure breed found throughout Asia and a part of Africa. They are herded upon the open country. The carpets and rugs for which Persia is famous are manufactured from the wool of these sheep.

384 B. C.—Aristotle taught that in man and the higher animals the blood was elaborated from the food in the liver, thence carried to the heart and by this organ through the veins over the body. It is called the discovery of the circulation of the blood.

340 B. C.—Theophrastus, Greek philosopher, one of the first to study plant growing. He preserved the writings of Aristotle. He spoke of the productions of old pear trees.

312 B. C.—The Applan Way the "Queen of Roads," extending 350 miles from Rome to Brundisium, was begun this year by Caesar Appius Claudius. It has borne the traffic of 2,000 years without material injury.

264 B. C.—Carthage, in Northern Africa, at war with Rome, almost continually, until destroyed in the year 146 B. C.

149 B. C.—Cato, the Censor, Roman citizen, died in this year. He gave to the world the most minute particulars regarding the management of slaves on his large Sabine farm, also all the details of husbandry, from the plowing to the reaping and thrashing of the crop.

140 B. C.—As the Romans conquered the smaller states of Italy they took possession of the conquered lands, passed the Agrarian law, which enacted that no citizen should

possess more than 500 acres. The enforcement of this law occasioned civil war, which lasted several years.

80 B. C.—**Fine-wool sheep** of Spain spoken of by the historian Strabo.

79 B. C.—This is the year of the eruption of Mount Vesuvius, when Pompeii and Herculaneum were destroyed.

72 B. C.—The construction of the **Colosseum of Rome** was begun this year under the direction of the Emperor Vespasian.

70 B. C.—According to the naturalist, Pliny, the common **cherry tree** was introduced into Italy by the Roman soldier Lucullus from Cerasus, in Pontus, Asia Minor, about this time.

60 B. C.—**Butter** first used by the Portuguese.

55 B. C.—This is the year in which **Julius Caesar** first visited Britain.

44 B. C., March 15.—This was the day of the assassination of **Julius Caesar** in Rome.

40 B. C.—Virgil mentions **pears** which he received from Cato.

40 B. C.—In the *Georgics*, a poem written about this time and which is the best known of the ancient works on agriculture, Virgil, the poet, advises husbandmen to "bring down the waters of a river upon the sown corn, and when the field is parched and the plants drying, convey it from the brow of a hill in channels." This is the first writing on irrigation.

27 B. C.—In this year the Romans under the Emperor Agrippa built the famous Pantheon of **concrete**. This building is still standing, and the splendid dome, 142 feet in span, is one of the sights of the Imperial City.

CHRISTIAN ERA—FIRST CENTURY.

31.—"The kingdom of heaven is like to a grain of mustard seed which a man took and sowed in his field, which is indeed the least of all seeds, but when it is grown it is the **greatest among herbs** and becometh a tree, so that the birds of the air come and lodge in the branches thereof."

32.—And Jesus said unto him: "No man having put his hand to the plow, and looking back, is fit for the kingdom of God."

40.—An interesting and valuable item appeared in the "*Acta Diurna*," a record kept in Rome during the reign of the Emperor Caligula and reproduced later by Petronius Arbitr in his work entitled "*The Supper of Trimalchio*." It seems that Trimalchio was a farmer near Cumae, in Italy, and his farm occupied an immense extent of territory. The work referred to says: "On June 25th, on Trimalchio's farm near Cumae, were born seventy children, of whom thirty-six were of the male sex. The same day fifty thousand modii of wheat were removed from the thrashing floor to the granaries; five hundred young oxen were broken. The same day one of the slaves, named Mithridates, was executed by crucifixion, because he had cursed the sacred name of the emperor."

50.—"But others fell into good ground and brought forth fruit, some an hundred-fold, some sixty-fold and some thirty-fold."

50.—About this time Lucius Junius Moderatus Columella, a Roman citizen, wrote twelve books on **agriculture**, one of which on gardening, entitled *De Re Rustica*, is in verse. His works are still extant, translations being available.

50.—A supposed improved **variety of cherry** was introduced in Britain about the middle of the first century.

51.—In the reign of Emperor Claudius, Columella, a distinguished agriculturist, introduced many of the Tarentine breed of sheep from Italy into Spain, that country was under Roman dominion at that time. He also was a general improver of sheep and became the principal originator of an immense **fine-wool sheep husbandry**, which through Spain has enriched three continents—Europe, America and Australia.

61.—Poppaea Sabina, wife of Nero, Emperor of the Romans, is reported to have

paid a sum equal to American four cents a quart for **asses' milk** to bathe in.

75.—In Pompeii, an ancient city of Naples, afterwards destroyed by an eruption of Mount Vesuvius, it is stated that a six-ounce loaf of **wheat bread** cost a sum equal to three cents of the present day.

75.—Publicus Cornelius Tacitus, Roman historian, mentions the manufacture of woolen cloth at Cirencester, Gloucestershire, in England, stating that the fullers (engaged in finishing cloth) were allowed to dry their cloth by the roadsides.

77.—Pliny, the Elder, Roman author, born A. D. 23, left a work entitled "*Natural History*." In his writings there is the first account of a **machine for reaping grain**. He says: "In the extensive fields in the lowlands of Gaul, vans of large size, with projecting teeth on the edge, are driven on two wheels through the standing grain by an ox in a reversed position; in this manner the ears are torn off and thrown into the van."

THE THIRD CENTURY.

280.—It is generally believed that about this time Emperor Probus encouraged the planting of vineyards in Britain.

THE FOURTH CENTURY.

325.—Included in the writings, which assert that Egypt, Nubia, Assyria and Persia all had **horses before Arabia**, is the assertion that the Roman Emperor Constantine presented the Arab Sheikhs of the tribe called Yemen with 200 well-bred horses from Cappadocia, in Asia Minor. Constantine died in the year 337.

400.—From this year to 409 the Romans were leaving Britain.

THE FIFTH CENTURY.

452.—Year in which the city of Venice was founded.

476.—About this year commenced a period in which for several hundred years were called the Dark Ages.

THE SEVENTH CENTURY.

622, June 20.—This is the year of the Hegira, the name given to the flight of the Prophet Mahomet from Mecca.

THE EIGHTH CENTURY.

732.—The battle of Tours, in which Charles Martel defeated the Saracens, is considered as contributing to the establishment of **horse breeding** in LaPerche and Normandy. On distribution of the spoils of war many Saracen horses went to these provinces, where they were crossed upon the mares of Brittany, and on the luxuriant pasturage developed a draft horse of great excellence, the Percheron horse of France.

THE NINTH CENTURY.

895.—King Alfred the Great of England encamped his army near London to protect the **harvest reapers** while gathering their crops against excursions of the Danes.

THE TENTH CENTURY.

936.—About this time, according to Whyte, in his *History of the British Turf*, the earliest mention of race horses in England, called running horses in those days, was when Hugh Capet, founder of the royal house of that name in France, sent **horses as a present** to King Athelstane, whose sister, Ethelswitha, he was soliciting in marriage.

THE ELEVENTH CENTURY.

1016.—Poitou jacks of France mentioned in literature of that day.

1010 (about).—First windmills erected in Europe.

1066.—**Horse shoeing** was introduced into England from Normandy by William the Conqueror.

1100.—The Japanese court ladies as early as this date prepared a favorite perfume from the **Ramanas rose**.

THE TWELFTH CENTURY.

1150 (about).—Cotswold sheep imported into England from Spain. This is not quite authentic. A century later Cotswolds were a well-known breed in England.

1159.—Smithfield, in the center of London, first mentioned as a live cattle market.

1152.—William Hale-Hale, historian and editor of the "Domesday Book" of St. Paul's Cathedral of London, England, makes record of leasing the church farms in Hertfordshire, England, which provided that the tenant should cultivate and conduct the farm on what was called the three-field husbandry, a rotation of about one-third in oats, one-third in wheat or rye, and one-third fallow or "terre warecunda." The custom was to rotate crops from beginning to end of the lease and to restore the land to the owner in the condition it was leased.

1158.—In the accounts of the British government of 1158-9 occur mention of payments to the vine dressers of Windsor. It appears also that the gardens at Windsor were enclosed by a ditch.

1165.—The earliest drawing or view of a monastic garden in England was that of Canterbury, and was drawn by the Engineer Wibert. It is now preserved in the library of Trinity College, Cambridge. The plan records the trees and vines, fish ponds, etc.

1176.—Early evidence of the existence of orchards is a Bull of Pope Alexander, III., issued in this year, confiscating the property of the monks of Winchenley, in Gloucestershire, England, with the "town of Swiring and all its orchards."

1185.—The manufacture of wool first mentioned in English literature.

1199.—King John of England encouraged horse breeding by importing Flemish stallions—origin of the English draft horse.

THE THIRTEENTH CENTURY.

1210.—According to the Historian Speed, King John of England received from Maud De Breos forty cows and a bull, all white with red ears, as a present to his queen, in order to appease his majesty, whom her husband, De Breos, had offended.

1213.—Alexander Neeham, Bishop of Cirencester, in England, a learned writer, touched incidentally upon fruit, vegetable and herb growing and flowers. He mentioned that a garden should be adorned with roses and lilies, turnsole, violets and mandrake. The garden should have parsley and cost, and fennel, lettuce, cress, onions, leek, garlic, pumpkins, shalots and cucumbers. He also mentions meddlars, quinces, Warden pears, peaches and pears at St. Regula.

1215, June 15.—At Runnymede, King John was forced to grant the English people a great measure of liberty by signing the Magna Charta.

1236.—At this time a hen in Paris was generally sold for an amount equal to American two cents.

1249.—A Scottish history mentions black (Galloway) cattle as being reared in great numbers.

State Fair of 1909. Exhibited by C. S. Hechtner, of Chariton, Iowa. At the American Royal Show this young bull was first in his class.

1259.—Henry, III., of England, made extensive alterations at the palace of Westminster, and among payments to carpenters and other workmen was an item of payment to laborers for "leveling the area of the garden with a roller."

1274.—In this year, in Venice, it is recorded that a pig sold for the equivalent of fifty cents in American money.

1290.—The first importation of oranges into England in a cargo of assorted fruit from Spain.

1292.—The only kind of apple specially noticed in England at this time was the "Costard." This variety has been preserved in history by the word "Costermonger," the name by which the sellers of this fruit were known. The Costard apple was the most popular for several centuries. The Regal pear and the Calluwell pear were also early fruits.

THE FOURTEENTH CENTURY.

1305.—In the time of Edward, I., King of England, the "acre" as a land measure was reduced to a standard.

1317.—According to the New International Encyclopedia, in August of this year, in England, wheat was twelve times as high in price as in the following September. It was a period of alternations of indolence and bustle, of feasting and semi-starvation. Rye was the breadstuff of the peasantry. Little manure was used. Oxen, not horses, were used for teams.

1327.—Edward, III., in order to improve the breed of horses, prohibited exportation.

1340.—First "worsted" manufactured at Worsted, in Norfolk, England. Worsted is spun wool manufactured into cloth.

1345.—At this time, in England, and near London particularly, fruits and vegetables, such as then were raised, were sold at a market place near St. Paul's church yard, but owing to the "scurillity, clamor and nuisance of the gardeners and their servants, which had become so obnoxious to the people dwelling there," the Mayor and Aldermen being appealed to, designated another place (now called Austin Friars), where sales could be made, and nowhere else.

1346.—First authorization in England for the erection of toll-gates under King Edward, III.

1352.—The Almoner at Winchester Cathedral, in England, made note that this was a bad year for apples; also that the cider supply gave out.

1369.—About the earliest account books of farming operations were kept and preserved at the Norwich Priory and Abingdon Abbey, in England. These accounts show the receipts and expenses of the garden operations, but not the plants that were grown or the processes of cultivation.

1380 (about).—Richard, II., King of England, compelled horse dealers to limit their prices to a fixed maximum.

THE FIFTEENTH CENTURY.

1402.—Sir William Clopton, an Englishman, granted to Thomas Smyth a piece of ground, called Dokmedwe, in Houstede, for the annual payment of a rose to Sir William and his heirs, the demand for roses being so great in those days that bushels were frequently paid by vassals to their lords, both in England and France.

1430.—In this year it is said that England imported raw cotton from the Levant, which includes Egypt, Asia Minor, islands and countries east of Italy, in or bordering on the Mediterranean Sea. It was then named cotton wool.

1410.—The earliest known original work on gardening, written in English, was by Ion Gardener, and the manuscript exists in Trinity College, England, to this day. It was called, "The Feate of Gardening." The treatise was so thoroughly practical that the directions it contains might be followed with successful results to the present day.



STANLEY OF MAPLES—A YEARLING GALLOWAY BULL. Junior and grand champion of the Galloways at the Illinois

1449.—In England the tenant was for the first time secured in possession, during term of lease, against a buyer of the land.

1467.—Permission granted by King Henry, IV., of England, to export a few Cotswold sheep to Spain.

1469.—In England, the tenant farmer was first protected from having his property carried off for the landlord's debts beyond the amount of rent due.

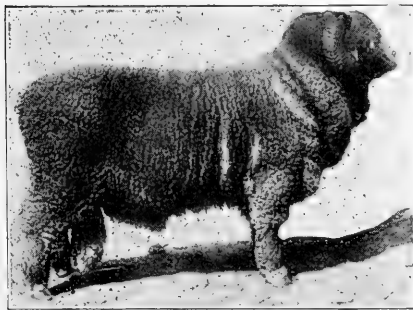
1472.—In this year, in Venice, Jensen, a publisher, printed the existing works of Columella on agricultural subjects which were written in the first century.

1485.—Previous to the reign of Henry, VII., King of England, which began in this year, there did not grow in that country any vegetable or eatable root, such as carrot, parsnip, cabbage, etc.

1488.—In England a law was passed to stop laying arable land to pasture and suffering farm houses to fall to ruin. Owners were required to till a portion of the soil and keep the farm houses in repair.

1490.—Comparative Peace, which followed the Wars of the Roses in England, encouraged a new style of architecture. The gardens were no longer confined within the castle walls. The red brick houses succeeded old castles. Some houses with gardens were surrounded by a moat, but gardens were soon extended outside the moat. Trellis railings also came into fashion and remained in vogue for many years.

1492.—Discovery of America.



MERINO RAM — TWO YEARS OLD. Grand champion, Louisiana Purchase Exposition, St. Louis, 1904. Exhibited by R. D. Williamson, of Xenia, Ohio.

1493.—Sheep of Spanish origin brought to the United States by Christopher Columbus.

1493.—First cattle introduced into America by Columbus from the West India Islands.

1493.—Hogs brought over by Christopher Columbus on his second voyage, landing at Hispanola.

1493.—Indian corn (maize) first taken to Europe.

1494.—In this year Henry the Seventh, King of England, passed a law that no one should export a horse or mare, or carry it beyond sea except for his own use. With this exception, that any mare of three years old and upwards, whose price was not above six shillings and eight pence, might be exported; the owner, however, was compelled to sell her at the port to any person who should pay him seven shillings.

1500.—In the reign of Henry, VII., gelding or castrating horses first practiced in England.

THE SIXTEENTH CENTURY.

1509.—The common garden or bush bean first cultivated in England.

1516.—In this year the gooseberry bush was planted in the gardens of Henry VIII., King of England.

1520.—At this period hops were first cultivated in England.

1521.—Cortez, Spanish commander, enter-

ing Anahuac, the Aztec capital of Mexico, discovered buffalo in the menagerie of the King, Montezuma.

1522.—Rice culture reported to be successful in Lombardy, Northern Italy.

1523.—In a letter written to friends in Europe, Alejandro Geraldine, then Bishop of Santo Domingo, mentions turkeys. He is regarded as the first author who refers to this fowl.

1524.—According to C. L. Bonaparte, in his Natural History of Birds, turkeys arrived in England in this year from Spain. Although turkeys were originally from the American islands and continent, the English supposed or were told the birds were originally from Turkey, which gave them a satisfactory name, although they were not entitled to it. At this time all commerce between America and Europe was with Spain.

1524.—The apricot introduced into England by Woolf, the gardener to King Henry, VIII.

1525.—Spaniards exported the first cattle from the West Indies into Old Mexico.

1526.—The pineapple mentioned by Oviedo, who called it Pinas. Oviedo y Valdes was Spanish historian of the new world and was Governor of the Island of Hispanola.

1527.—Florida the first part of the main land of the United States to receive horses from the Spaniards.

1529.—When the king, Henry, VIII., of England, took possession of Cardinal Wolsey's lands, including Hampton Court, he retained John Chapman, the head gardener. Of course, the gardener received board and lodging.

1530.—Salads, carrots and other edible roots first produced in England.

1530.—The strawberry introduced into the gardens of England from Flanders.

1533.—Richard Harris, an English fruit grower in service of King Henry, VIII., planted many apple orchards in the county of Kent, near London.

1534.—In England, owing to large numbers of sheep naving come into few persons' hands, a penalty was imposed on all who kept above 2,000 sheep.

1534.—The Book of Husbandry printed in this year. First and best of early English works on agriculture; ascribed to Fitzherbert, a Judge in the reign of Henry, VIII.

1534.—Extract from Book of Husbandry: "And because that shepe in myne opynyon is the mooste profytabyll cattell that any man can haue, therefore I pourpose to speake fyrst of shepe."

1534.—Quotation from the Book of Husbandry, published in this year: "A houseband cannot thryve by his corne without cattell, nor by his cattell without corne."

1534.—From the Book of Husbandry: "And in the beginning of March or a lyttel afore, is tyme for a wife to make her garden, and to gette a many good seedes and herbes as be good for the pottle and to eate, and as ofte as nede shall require; it must be weded, for els wedes wyl ouer-growe the herbes."

1534.—In Great Britain, different individuals in the previous years had accumulated in their own hands a number of landed properties, a multitude of cattle, and especially of sheep. Some of them possessed 24,000 sheep, others 10,000, etc. Tillage was thereby displaced, the country depopulated and the price of sheep and wool raised in an unheard-of manner. It was then provided by law that no one, therefore, shall possess more than 3,000 sheep, with the exception of laymen on their own inheritance, who may keep as many as they please, but they may not carry on sheep farming on other properties.

1535.—In this year, when the French navigator Cartier visited the country which is now called Montreal, he found the town was situated in the midst of extensive corn fields.

1535.—Captain Jacques Cartier, French navigator and explorer, in his visit to the St. Lawrence river, saw and admired the wild plum trees of North America.

1535.—King Henry, VIII., of England had laws passed for selection and mating for the **improvement of horses** and to eliminate scrubs.

1540.—Beginning in April, Francisco Vazquez de Coronado, the Spanish explorer, penetrated to the country adjacent to the little Colorado, where he found **maize**, **Guinea cocks** and **peas** in possession of the natives.

1541.—In the record of the travels of Francisco Vazquez de Coronado in the territory now comprised in the state of Kansas, he said: "All that way the plains are as full of **crooked-back oxen** (buffalo) as the Mountain of Serena in Spain is of sheep."

1542.—At Barcelona, Spain, in this year, a recorded **price for eggs** was equal to twelve cents a hundred.

1542.—A plant named **Shorghri** (modern **sorghum**) described by Fuchius, of Belgium, author of History of Plants.

1547.—In the reign of Edward, VI., King of England, exportation of **horses to Scotland** was prohibited.

1548.—The common **jasmine** (J. officinale) introduced into England from the East.

1549, March 8th.—Bishop Lattimer preached his famous "**Sermon of the Plough**" before the Court of King Edward, VI., of England, and complained that where formerly there were dwellings and inhabitants there is only the shepherd and his dog. He reproached the land owners with depopulating the country by turning cultivated farms into stock ranches.

1550.—The origin of the **Damask rose** is unknown, but it was introduced into Europe from Asia Minor some time in the sixteenth century, and about this year.

1550.—The **peach**, which is a native of Persia, was considerably cultivated in Britain about this time.

1550.—De Re Rustica, **first work on agriculture**, published by Conradus Reesbachius, being translation of ancient work by Columella.

1550.—In this year Evliya Effendi, a Turk, wrote an elaborate description of the **Angora goat**.

1551.—Konrad von Gessner, an eminent Swiss naturalist, established a **garden of fruits and flowers**. He published a history of annuals and classification of plants.

1551.—Bishop Scory, of Rochester, presented a petition to the King of England, saying that now there are only "ten ploughs where formerly there were from forty to fifty." He said that the country population of England would soon be more like the slavery and peasantry of France than the ancient and godly yeomanry of England. The land owners found it easier to make money running **grass farms** than cultivating grain crops.

1552.—The **grapevine** first introduced into England from Flanders. First planting in the county of Suffolk.

1553.—The **currant shrub** was imported into England from the Greek island named Zante. The currant was originally named after the city of Corinth, which was an important Greek mercantile and exporting center.

1555.—In the great famine in England in this year, **wild fitches** kept many farmers and others from starving. Fitches are the fennel flower, a coarse kind of pea, hard but nutritious.

1555.—In this year, in reporting his observations, Sir Ralph Lane, the English Administrator in America, said that the **grapes of Virginia** were larger than those of France, Spain or Italy. Sir Ralph Lane was the first Governor of Virginia.

1562.—Tusser in his "**Five Hundred Points of Good Husbandry**," says:

"Wife, into the garden and set me a plot With strawberry roots of the best to be got.

Such growing abroad, among thorns in the wood,
Well chosen and picked, prove excellent good."

1562.—Earliest planting of fruit by white

men in North America. The Spaniards under Menedez planted **orange trees** at St. Augustine, Fla.

1562.—Jesuit Fathers planted **pears** in the region of the Great American Lakes.

1562.—The book, entitled "**Five Hundred Points of Good Husbandry**," by Tusser, was recommended to be taught in English schools. It was written in verse.

1565.—Sir John Hawkins credited with **introducing the potato in England** in this year.

1562.—**Peaches** introduced into England from Persia.

1562.—Quotation from Tusser:

"First barley ere rye,
Then Pease bye and bye,
Then fallow for wheat,
Is husbandry Great."

1562.—This is the year in which the **English walnut** is credited with arriving in England from Rome, where it was called "the Nut of the Gods."

1564.—According to an article by Geo. C. Husman, of the Department of Agriculture, considerable **wine was produced** from a native grape in Florida as early as 1564.

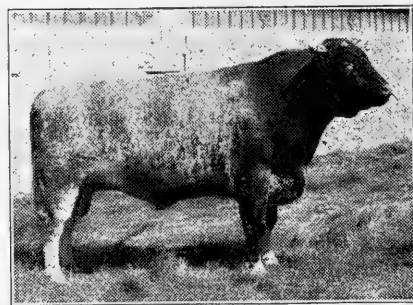
1565.—Nicolo Monardes published writings on **American plants**, probably the earliest separate writings on the subject. Issued in serial form in Spain.

1565.—In this year the Spanish colonies in Florida were visited by John Hawkins, an English captain, who said that twenty hogsheads of wine had been made in a single season from the **wild grapes**.

1565.—In a letter of this date Gessner, the Swiss botanist, mentions the **Musk rose** as growing in a garden at Augsburg.

1565.—Large importations of **sheep** in Florida from Spain. Supposed to be the Churro, or common sheep of Spain.

1565.—Menedez founded a settlement at St. Augustine, Fla., the first **permanent colony** on this continent.



WHITEHALL MARSHALL — Champion Shorthorn bull.

1567.—Charles, IX., King of France, issued a decree in regard to Paris **slaughter houses** and ordering improvements in butchering methods. The slaughter houses abutted on the principal thoroughfares, hordes of foot-sore animals impeded traffic, the offal was left on the streets and was washed by rains into the river Seine.

1570.—**Hemp and flax** mentioned as being common crops in England. Buckwheat also mentioned as sown after barley.

1571.—The **Festival of the Rose** instituted by Pope Pius, V., in thanksgiving for the victory gained by the Christians over the Turks at Lepante.

1573.—The **hollyhock** introduced from Syria into English gardens.

1573.—**Coffee**, a native of Arabia, Felix and Ethiopia, first introduced to the notice of Europeans by Ramulfus.

1574.—Reynolds Scott, in England, published a treatise on the **culture of hops**.

1578.—"**Whole Art of Husbandry**" printed in England by Barnaby Googe, mostly translation from the German.

1580.—Between this year and 1585 the **Irish potato** was introduced into Europe by the Spaniards.

1580.—Shorthorned cattle existing in Durham and Yorkshire, England, from which the modern **Shorthorns** are in greater part descended.

1582.—The first record of the **Musk rose** having been cultivated in England is in Richard Hakluyt's writings, in this year, who states that it was brought from Italy.

1582.—In this year, in England, in one of the **southwest counties**, a capon cost sixpence (12 cents), a calf five shillings (\$1.20), a firkin of butter seven shillings and sevenpence (\$1.82), a cock (for fighting) fourpence (8 cents), a pullet threepence (6 cents), a milch cow cost thirty shillings (\$7.20), a bullock seven shillings (\$1.68), a horse twenty-two shillings (\$5.28), a porkling twenty-eight pence, or 56 cents.

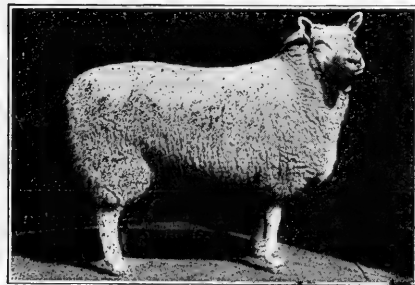
1584.—Don Antonio de Espejo, sent by the Viceroy of New Spain, explored the Pecos river country and mentioned a great multitude of **oxen or kine** (buffalo) that fed upon the banks thereof, by which they traveled for the space of 120 leagues, still meeting with "store of the said cattell."

1584.—Sir Walter Raleigh fitted out an expedition in England and landed in America. The colony was called **Virginia**. As they did not cultivate the soil, they were starved out and returned to England the next year, where they introduced tobacco.

1586.—In this year Sir Francis Drake is credited with introducing the **potato** in England.

1586.—On his return from Virginia, Sir Walter Raleigh introduced **potatoes and tobacco in Ireland**. He had an estate at Myrtle Lodge, Youhal, county Cork. The potatoes were suitable to the climate and flourished, becoming a great benefit to the island, but the tobacco growing met with poor success in Ireland.

1588.—Thomas Hariot, a returned colonist belonging to the Sir Walter Raleigh expedition to Virginia, published in London the first article ever written on **Indian corn** in North America. It was again published in Frankfort and illustrated by De Bry, a wood engraver.



CHEVIOT EWE—Grand champion at the Louisiana Purchase Exposition, 1904.

1588.—Origin of **Cheviot sheep** said to be that sheep swam ashore from the wrecked ships of the Spanish Armada and escaped to the Cheviot hills.

1591.—The **coffee plant** scientifically described by Alpinus.

1594.—Sir Hugh Plat, in a book entitled "Jewel House of Art and Nature," makes useful observations on **manures**.

1594.—In this year, in Warwickshire, England, a **farm laborer** received fourpence (8 cents) a day, with "meat and drink," or eightpence to tenpence finding himself. Mowers got eightpence (16 cents) with food, or fourpence (28 cents) without it; reapers, sixpence to twelpence, according to whether they boarded themselves or not.

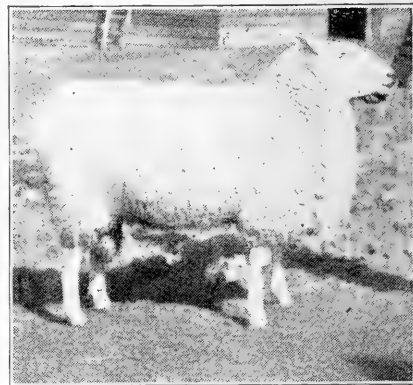
1596.—Gerarde speaks thus early of the

white lily—the lily of the poets and painters—being an old garden plant.

1597.—The **cauliflower** known in England but very rare. The plant was mentioned by a writer named Gerarde, and was supposed to have come from Italy.

1597.—The common and well-known **lilac** introduced into European countries by way of Constantinople.

1597.—In this year John Gerarde published his **Herbal or General History of Plants**. Born in 1545 and educated as a surgeon, his tastes led him to study the cultivation of plants. His garden at Holborn (now in the center of London), England, excelled any in that country. His book was the standard in botany for a hundred years.



LEICESTER SHEEP—SANFORD. Weight, 420 pounds heaviest ram exhibited. Fleece record, 26 pounds. Grand champion of the breed at the Louisiana Purchase Exposition, 1904. Exhibited by Alex W. Smith, of Maple Lodge, Ontario, Canada. Photograph by R. J. Rogerson.

1598.—In this year Senor Juan Ornate started out from Zacatecas, in Mexico, to explore the country now known as **New Mexico**. He had 400 colonists, 83 wagons and 7,000 cattle. He founded Santa Fe.

1600.—Robert Bakewell, of England, commenced the **improvement of sheep**, establishing a breed of **Leicesters**, also advocating grand principles of breeding by selection. He also improved the **Longhorn cattle of Leicestershire**.

THE SEVENTEENTH CENTURY.

1602.—**Oats and barley** first cultivated in America in Gosnold's colony.

1602.—The first **wheat** was brought to this country by Bartholomew Gosnold and landed on an island in Buzzard's Bay, on the southern coast of Massachusetts.

1602.—**Beans** were cultivated on islands south of Massachusetts.

1604.—In this year M. L. Escarbot brought **horses to Acadia**, an island once a part of French territory in America, and from there the French who extended their settlements into Canada in 1608 took the horses, which probably laid the foundation of what are now known as Canadian ponies.

1605.—Santa Fe (New Mexico) settled in this year by the Spanish. Don Juan de Ornate, of Zacatecas, in Mexico, was the originator of the colony. It is the **second oldest white settlement** in the United States.

1607.—First permanent **English settlement** in America at Jamestown, Va. Captain Christopher Newport commander of the expedition, his companions being Bartholomew Gosnold, John Smith and others.

1607.—Sir John Norden printed a book called "Surveyor's Dialogue" in England. Speaking of the famous **Salisbury meadows**, he says: "When cattle have fed their fill

hogs, it is pretended, are made fat with the remnant—namely with the knots and sappe of the grass."

1607.—First recorded effort in this country at introducing **foreign fruits** by the Jamestown colonists in May of this year.

1607.—Use of **freezing mixtures** of ice or snow in combination with salt, saltpeter or other chemical agents in use at this time in a small way.

1607.—A **company of English** attempted to settle where is now Kennebec, Me., but returned to England the following year.

1607.—"Clouer Grasse, or the Grasse Honeysuckle," (**white clover**), is directed to be sown with other hay seeds. In Surveyor's Dialogue.

1608.—The French at this time introduced **cattle into Canada**.

1608.—The James river settlers learned the **cultivation of corn** under tuition of the Indians.

1608.—Captain Newport sailed from Jamestown, Va., for England, carrying with him **twenty turkeys**, "the first introduction of that fowl into Europe."

1609.—First authentic record of a **yield of corn** produced in America by white men was forty acres in the Jamestown colony in Virginia.

1609.—A pamphlet published in London predicts that **cotton would grow** as well in Virginia as in Italy.

1609.—**Sheep introduced** into Virginia from England. Ravages by wolves kept the flocks down to small numbers.

1609.—**English horses** landed at Jamestown, Va. There were six mares and one horse.

1609.—A book published in England by Butler, of Oxford, entitled "Feminine Monarchie; or, the **History of Bees**."

1609.—The London Company imported **swine into Virginia**, and they increased so fast that in 1627 the colony was in danger of being overrun with them, while the Indians fattened themselves on pork from the hogs that had become wild from running at large in the woods.

1610.—Lord Delaware arrived in America from England and brought with him French vine dressers. He **planted vineyards** of native grapes. He was Governor of Maryland.

1610.—**Cattle having become extinct** in Virginia on account of the scarcity of food, another stock was brought from the West Indies, and the penalty of death for killing them was enacted.

1610.—About this year King James I. of England, purchased a celebrated **Arabian horse** from a merchant named Markham, for which he paid five hundred pounds.

1611.—First cultivation of wheat in Virginia was reported in this year.

1612.—Oil of Rose discovered by accident this year, according to Langles.

1614.—Plantings of imported **apple and pear trees** in New York. One pear tree of this planting at Third avenue and Thirtieth street, New York City, until 1866.

1616.—First known **cultivation of tobacco** in the state of Virginia.

1617.—This is mentioned as the remarkable period of the first introduction of the labor of the **plow in Virginia**.

1618. January 17th.—A patent was granted in England to David Ramsey and Thomas Wildgosse for a machine to "plough ground without horse or oxen, and to enrich and make better and more fertile as well barren peate, saite and sea sande, as island and upland grounde, within our Kingdom of England and Ireland and our Dominion of Wales, etc. etc." It was the first patent granted in which the great power of steam for the purpose of assisting in the cultivation of the soil was applied.

1618.—In this year, at Epsom Downs, in England, the saying originated: "It is one thing to **take a horse to water** and another to make him drink." It appears that during a drouth Henry Wicker, a herdsman, discovered water in a small hole on the Epsom

Commons. He used a spade to widen the hole and then discovered that neither he nor his stock could drink the water. This led to the discovery of the well-known medicine, Epsom Salts.

1619.—Grapes mentioned in history as growing at Jamestown, Va.

1619.—**Negro labor** first introduced into Virginia. Twenty purchased by tobacco planters from a Dutch trading vessel.

1620.—**Coaches** as means of public conveyance first used in England and France, and were very slow in coming into general use.

1620. December 22d.—The Mayflower landed 102 pilgrims at **Plymouth Rock**.

1620.—The Pilgrim Fathers found extensive **plantings of corn** in New England on their arrival.

1621.—Edward Winslow wrote that in New England "**are grapes**, white and red, and very sweet and strong also."

1621.—The Governor of Massachusetts requested the Indian Chief, Massasoit, to exchange **seed corn**, that he might judge which was best. The Indians selected the finest ears and taught the settlers how to do the same.

1621.—Earliest known experimental **cotton planting** in Virginia.

1621.—The Pilgrim Fathers began the **cultivation of corn**, manuring, as the Indians did, with fish. "According to the manner of the Indians, we manured our ground with berrings, or rather shads, which we have in great abundance and take with ease at our doors. An acre thus dressed will produce and yield as much corn as three acres without fish."

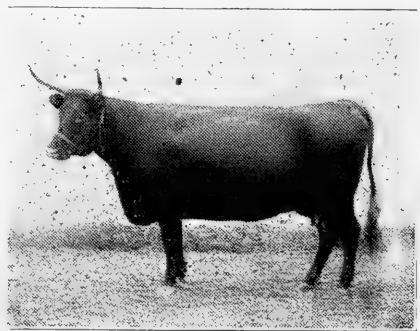
1621.—In this year The London Company sent "**silke worm seede**" to Virginia along with grapevines. This was the beginning of many attempts to establish a great silk-growing industry in America.

1621. March.—Record of **Plymouth Colony**: "They sowed six acres of barley and pease and set twenty acres of corn, making use of ten bushels which they brought from subterranean storehouses of the Indians. In this work much assistance was rendered them by Squanto, a faithful Indian, who taught them how to plant corn, manure with fish, and hill it."

1621.—Eleven women emigrated from England to become **wives of colonists** in Virginia. The passenger fare across the ocean was paid by 120 pounds of tobacco for each person.

1622.—In New England it is recorded at this time that the Indians made a habit of **setting fire to the country** twice a year, in the spring and in the fall, because it would otherwise be overgrown with weeds and brush.

1622.—An observer at Plymouth Colony in this year said: "**The chestnut, hazelnut, butternut and shagbark** yielded contributions to the store of food laid up for winter."



DEVON COW—PRETTY PET. The Devon breed of cattle passes as a dual-purpose breed—good for beef and good for the dairy.

PRETTY PET is a handsome example of the Devon; she was first-prize cow at the Pan-American Exposition at Buffalo, 1901.

1623.—A few **Devon cattle** crossed the Atlantic ocean in the ship *Charity*; said to be consigned to a Mr. Winslow, of Massachusetts.

1623.—A Department of Agriculture report says that about this time **flax** was introduced upon the continent of America solely for the fiber. For a period of 150 years thereafter, or until cheaper cotton fabrics began to supplant linen ones, flax played an important part in the progress of the country, because, as it did, the basis of that famous household industry whose home-spun products were necessities of life, second only to food.

1623.—**New Hampshire settled by the English in this year.**

1623.—Indefinite information concerning importation of **Dutch horses** arriving at New York.

1624.—Early settlers introduced **sheep** from England into the New England States.

1624.—An early **importation of cattle** to New England, consisting of three heifers and a bull, having been made in this year, the herd had increased to twelve by 1627, and in that year was divided into twelve lots. "These lots were drawn for," says Russell, in *Pilgrim Memorials*, "affording the first recorded **cattle show** in New England."

1625.—**Buckwheat** first cultivated in America, on Manhattan Island.

1625.—The Dutch Colony on the Hudson was supplied with **all sorts of plows** and agricultural implements.

1626.—**Flax** taken to **Holland** that was grown on Manhattan Island.

1626.—The Dutch bought the **island of Manhattan** from the Indians for \$24.00.

1627.—First important **cattle imports** into New York state from Holland.

1627.—In this year only fifty **Hackney cabs** or coaches were in use in London, England, as public conveyances.

1627.—John Speed, agricultural author, mentions the excellent condition of **cattle** in Herefordshire, England.

1627.—Sir Anthony Ashley, of Wimborne, St. Giles, Dorset, England, died in this year. He first **planted (improved) cabbages** in England, and at his feet a cabbage appears chiseled on his monument.

1629.—In this year six vessels arrived at Boston from England, bringing with their other goods some twenty-five **mares and stallions**. In the same year a number of Dutch, Swedish, Danish and French horses arrived in the colonies of New York, Connecticut, Maryland and New Jersey.

1629.—The **Spiderwort** was one of the first native flowers to find a home in England, it having been sent there from Virginia about the year mentioned.

1629.—First attempt at **hop raising** in the United States made in New Netherlands, now New York state.

1629.—Plymouth Colony **cultivated potatoes**.

1629.—Rev. Francis Higginson, writing from Massachusetts Colony in this year, said that excellent vines were there and that the Governor had **planted a vineyard**, with great hopes of "increase."

1629.—William Wood, writing from New England, said: "There is likewise **strawberries** in abundance, verie large ones, some being two inches about; one may gather halfe a bushell in a forenoon."

1629.—Captain John Smith, Governor of the Jamestown Colony, wrote, saying: "One Mistress Pearce, of Jamestown, an honest, industrious woman, had gathered from her garden in one year neere an hundred bushels of excellent figges."

1630.—In March of this year the Colonial Assembly of Virginia determined the **cash value of tobacco** for the first time in history. The price was six pence, equal to twelve cents, per pound.

1630.—In this year was written a poem

by a New Englander, which shows how generally the **pumpkin** was used for the table that early:

"Stead of pottage and puddings and custards and pies,
Our pumpkins and parsnips are common supplies;
We have pumpkins at mornings and pumpkins at noon;
If it was not for pumpkins we should be undone."

1630 (about).—Swedish immigrants introduced **sheep** into **New Jersey** and Delaware.

1630.—Earliest record of **pear tree planting** in New England was a pear tree in the garden of Governor Endicott's house, in Boston.

1630.—Origin of the saying "**Hobson's Choice**." This adage has been handed down to us from the Seventeenth Century and had its origin in the eccentricities of one Tobias Hobson. This worthy was a carrier of Cambridge, England, who died in the year 1630. In addition to his ordinary business he kept a stable and let out horses to the students at the university. He made it an unalterable rule, however, that each animal should have an equal period of work and rest, and would never let one out of its turn. Consequently, instead of being allowed to select the steed they most fancied, his customer had to take the one that stood next to the door. If it did not meet with their approval they had to go without a ride. Hence, the proverbial expression, "**Hobson's Choice**," used to signify a choice without an alternative.

1631.—**Cattle importations** into New Hampshire from Denmark arrived in this year.

1632.—Governor's Island, in Boston Harbor, was granted to Governor Winthrop on condition that he should **plant a vineyard** or orchard upon it.

1633.—A **list of vegetables** grown in New England before this year was given by a Mr. William Wood. He said also: "Whatever grows well in England grows well there."

1633.—In Virginia, in this year, **tobacco inspection warehouses** were established, in which all tobacco grown for sale was examined by Colonial inspectors, "who shall cause all the bad and ill-conditioned tobacco instantly to be burned, and the planter thereof to be disabled further from planting any more of that commodite of tobacco."

1634.—**Olives** introduced into Southern colonies without much success.

1634.—Cecil, the Second Lord Baltimore, established a **settlement** near the mouth of the Potomac river.

1634.—An act passed in the Irish Legislature against the cruel and common **practice of plowing** by fastening the plow to the tail of an ox or horse.

1635.—"*Canadensium Plantarum*," an illustrated book issued by Jacques Cornutus, is generally supposed to be the first published **work on American plants**.

1636.—Roger Williams settled what is now the **state of Rhode Island**.

1636.—At this time in the colony of Massachusetts Bay a **red calf** came to be **cheaper than a black one** on account of the greater liability to be mistaken for a deer and killed by the wolves. This is from Kettell's *Chatter on Agriculture in the United States*.

1637.—At this date only **thirty-seven plows** were in the colony of Massachusetts.

1639.—It was reported that one man made **500 barrels of cider** in New York state, indicating earlier general planting of apple trees in this country.

1640.—**Pork packing** in barrels as an industry said to have begun in this year at Salem, Mass.

1640.—William Kelft, Governor of New Netherlands, erected a private establishment on Staten Island, "which produced the **first beer made in this country**," says an authority.

1640.—**Tobacco** first reported as being grown in New England colonies.

1641.—Newmarket, England, as a **racine headquarters** dates from this year.

- 1644.—The Haymarket of the city of London established in this year; abandoned in 1830.
- 1645.—Sir Richard Weston, Ambassador from England to Bohemia, credited with first introducing "the great clover" in England, and turnips also. He was a useful writer on agricultural subjects.
- 1646.—In this year Joseph Jenckes, of Lynn, Mass., a native of Hammersmith, in England, was granted a state patent privilege for inventions, making mills for the manufacture of "sithes and other edge tools for ye more speedy cutting of grasse."
- 1647.—The apple recorded as grafted on the wild stocks of Virginia.
- 1647.—Rice culture in the United States began with half bushel of the grain sent over from England to the Virginia Colony in this year, from which a yield of sixteen bushels was obtained. The industry afterwards gave way to tobacco growing.
- 1647.—Exportation of wool first prohibited from Great Britain; also in 1660 and 1668.
- 1648.—An apple tree planted by Peregrine White, the first white child born in New England. Says the author of "Pilgrim Memorials," written in 1655: "It still produces apples, and the orchard in which it grows is now owned by his descendants, near the lot which he occupied in Marshfield."
- 1648.—Hops first raised in Virginia.
- 1648.—Rye as a field crop first grown in America in New England.
- 1649.—"The Improver Improved," an agricultural work by Blythe in England, recommends that turnip cultivation should be extended from the kitchen garden to the field as food for stock.
- 1650.—Hartleb, an English writer, mentions the practice of steeping and liming seed corn (wheat) as a preventive of smut.
- 1650.—French Work on Agriculture published by Oliver de Serres.
- 1650.—The "White Turk," Turkish stallion, owned by Mr. Place, stud groom to Lord Protector Cromwell, credited with being one of the originators of the thoroughbred horse.
- 1650.—A pearl barley mill invented in Germany.
- 1650.—Horses imported into South Africa from the island of Java by the Dutch East India Company.
- 1652.—Cape Colony, South Africa, first colonized under Van Riebeeck. The sheep which the European discoverers found in Cape Colony were the flat-tailed sheep, strongly resembling the well-known Persian variety.
- 1653.—Van der Donck, the traveler, wrote that by this year the Dutch settlers of New York had already blooming in their gardens white and red roses, eglantine, different varieties of tulips, violets, white lilies, anemones and marigolds.
- 1656.—Covent Garden market, the great wholesale fruit and vegetable market of the city of London, originated about this time by the construction of wooden sheds and selling stalls. Covent Garden was in earlier days the garden of Westminster Abbey, when it was properly named Convent Garden.
- 1657.—The exportation of horses from Virginia was prohibited in this year.
- 1660.—Earliest record of the use of mineral salts for increasing the yield of crops appears in a work entitled "A Discourse Concerning the Vegetation of Plants." It was read before Gresham College, in England, by Sir Kenelm Digby.
- 1660.—Ray, a writer, made a tour of the southern counties of Scotland. He said: "We observed little or no fallow ground in Scotland: some ley ground we saw, which they manured with sea wreck."
- 1661.—The Dutch East India Company sent two pounds two ounces of Chinese tea to the King of England as a rare and valuable offering. The first known tea to arrive in England.
- 1662.—First statute for levying tolls at turnpikes to make or repair roads.
- 1662.—The Dutch colony on the Hudson river, New York, added "a first-class wheel plow" with its pulleys, etc., to the stock of agricultural implements at a cost of sixty florins.
- 1663.—In this year, when the second charter was granted to Rhode Island by Charles II, King of England, it contained an inducement to anyone who would plant a vineyard.
- 1665.—Minister Colbert, Prime Minister to Louis XIV., established government studs in France.
- 1669.—The "Eyerly Turk," a Turkish stallion, ridden by Capt. Byerly, of the English army, at this time, is credited with being one of the foundation stock of the English Thoroughbred.
- 1670.—Permanent settlements in the tract of land south of Virginia, called Carolina, in honor of Charles II, of England.
- 1672.—John Josselyn published a book entitled "New England Rarities," discovered in birds, beasts, fishes, serpents and plants of that country.
- 1674.—Malpighi publishes a paper on the structure of plants.
- 1676.—Tax derived from tobacco exports this year amounted to £120,000 English money or, in round figures, \$700,000 in American money of the present day.
- 1680.—It is said that peaches were introduced about this time into America by the early settlers.
- 1681.—In Houghton's "Collections on Husbandry and Trade" appears the first notice of turnips being eaten by sheep.
- 1682.—William Penn established the first settlement in what is called Pennsylvania.
- 1682.—The Imperial stud of Russia received importations of Arab stallions, which caused a decided improvement in the horses of that country. It was by direction of Peter the Great.
- 1683.—Sheep raising in Pennsylvania dates from about this year.
- 1685.—This year witnessed the beginning of a small French colony in Texas under the Chevalier LaSalle, who landed on the shores of Matagorda Bay. The occupation was brief.
- 1686.—William Fitzhugh, in Virginia, described his own plantation and mentions a large orchard of about 2,500 apple trees, mostly grafted, well fenced with a locust fence.
- 1688.—Persian-Arab horses introduced into South Africa by the Dutch East India Company.
- 1688.—An English writer, Ray, mentions seventy-eight varieties of apples.
- 1688.—St. Marys, the oldest settlement in Michigan, established by the Jesuit Missionaries.
- 1690.—The first work treating of roses with any degree of method published. It was that by LaQuintyne, and issued in Paris.
- 1690.—Potatoes were beginning to attract notice in Scotland. "The potato" is a baciferous herb, with esculent roots, bearing winged leaves and a bell flower."
- 1690.—The Mango introduced into hothouse cultivation in England from the East Indies.
- 1690.—At this early date Boston, Mass., was doing quite a trade in packing and curing pork.
- 1691.—The Phlox, an American genus of plants, mentioned in a work published in London by Plukenet, a writer living before the time of Linnaeus.
- 1691.—Experimental proof of the sexuality of plants published for the first time by Camerarius, a German botanist. He was in charge of the gardens at Tuebingen.
- 1694.—A ship captain, seeking shelter in the harbor of Charleston, S. C., presented Thomas Smith, Governor of the province, with a sack of rice. From this the rice industry of the present was established.
- 1695.—In this year John Houghton, an Englishman, writing of dairy subjects, speaks of the Irish as rotting their butter and burying it in bogs. The burying of butter may have been for the purpose of

storing in time of need, or to hide it from invaders, or to ripen it for the purpose of developing flavor.

1697.—First agricultural work in Scotland printed under the title of "**Husbandry Anatomized**;" or, An Inquiry Into the Present Manner of Telling and Manuring the Ground in Scotland," by Donaldson.

1700.—Trustworthy records of the breeding of the **thoroughbred horse** were first begun in the stud book by Messrs. Weatherby.

THE EIGHTEENTH CENTURY.

1701.—Jethro Tull, a gentleman of Berkshire, in England, adopted the system of **sowing his crops in rows or drills** so wide apart as to admit of tillage of the intervals both by plowing and hoeing.

1704.—The **peppermint plant** mentioned and named by Ray in his book, "Historia Plantarum."

1706.—Practice of cutting clover green and giving it to cattle, **now called soiling**, mentioned as being a common practice at this time.

1710.—First attempt to **grow fig trees** in the state of California.

1712.—Naraldi, of Nice, invented glass **bee-hives**, enabling naturalists to study the in-door proceedings of bees.

1714.—Father Jartoux, a missionary among the Chinese, published a description of a Tartarian plant called **Ginseng**.

1716.—In this year, through efforts of Father Lafitau, a missionary amongst the Canadian Indians, the plant now known as **American Ginseng** was discovered near Montreal.

1716.—Thomas Fairchild, an English gardener, crossed the **Carnation** with the **Sweet William**. This is the record of the **first hybrid** (mixture of the species) in flowers.

1718.—The English thoroughbred stallion **Bulle Rock** foaled in this year was imported into Virginia by Patton & Gist in 1730, and is said to have been the **first thoroughbred to arrive in America**.

1719.—An hundred families from Ireland having settled at Londonderry, N. H., they introduced the **foot spinning wheel**, the manufacture of linen and the culture of potatoes.

1720.—Joseph Foljambe, of Rotherham, England, took out a **patent for a plow** with moldboard and landside of wood sheathed with iron plates, the share and coulter being made of wrought iron with steel edges.

1720.—In this year a **Galloway horse** was foaled at a village near Haddington, in Scotland, which lived to be sixty-nine years old. Wilkes' Spirit of the Times, authority for this statement, mentioned him in later years as being eleven hands high, and that he trotted cleverly right up to a few weeks of his death.

1721.—First efforts to **grow cotton** in Virginia date from this year.

1723.—Lord Bellhaven, of Scotland, published a book which he described as a "good, easy method of husbandry."

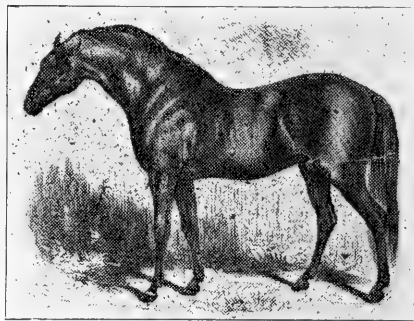
1723.—Mr Alstroemer, an enterprising Swedish farmer, introduced **Merino sheep** into his own country. He encouraged the government to establish an agricultural school, which offered premiums for Spanish Merinos and the best wool.

1723.—"Society of Improvers in the Knowledge of Agriculture in Scotland," organized. First of its kind in the United Kingdom.

1724.—The horticulturist Dudley said that **Indian corn** is of several colors, as blue, red and yellow; and if they are planted separately by themselves they will keep their own color; but if they are planted one color near another they will mix and interchange their colors.

1724.—Godolphin Arabian, the most noted of all the Eastern **thoroughbred sires**, foaled in this year. He was imported into England from France by a Mr. Coke. This great stallion was said to have actually been a cart horse on the streets of Paris. Colonel S. D. Bruce, authority on the thoroughbred

horse, said of him: "He unquestionably contributed more to the breed of thoroughbred than any stallion either before or since his time."



GODOLPHIN ARABIAN.—The thoroughbred horse that worked as a cart horse in Paris and was discovered in time to be the most valuable foundation sire of the breed.

1726.—A village near Boston, Mass., reported making **10,000 barrels of cider**.

1726.—The horticultural writer Dudley, in a paper in the Philosophical Transactions, said: "**Our apples** are without doubt as good as those of England and much fairer to look to, and so are the pears; but we have not all the sorts."

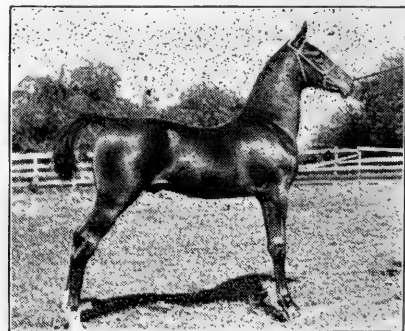
1727.—The **Moss rose** was introduced into England from Holland in the sixteenth century, and is first mentioned by Miller in the year given. Miller supposed it to be a sprout of the Provence rose, which opinion has been confirmed by modern botanists.

1727.—Hale's work published on **respiration of plants** and formation of sap.

1728.—The first **botanical garden** in the United States founded by John Bartram on the banks of the Schuylkill, not far from Philadelphia.

1728.—In this year mention is made of "little machines which, being played by the motion of a wheel, the cotton falls on one side and the seed on the other, and thus they are separated," a **primitive cotton-gin**.

1730.—In this year the first English **cotton-oil mill** was erected in Gloucester. The city of Gloucester is one of the important centers of enterprise in the west of England, not far from the seaport of Bristol, which is in the same county.



JUBILEE KING—SADDLE COLT, Foal of 1911. Already winner of first prizes at leading Blue Grass Fairs. Bred and owned by J. F. Barbee, Millersburg, Bourbon county, Kentucky.

1730.—The plain-gaited **saddle horse**, without education, developing at this time into the five-gaited saddle horse.

1731.—Speaking of the **tomato**, Philip Miller, in his *Gardeners' Dictionary*, says: "The Italians and Spaniards eat these apples (love apples) as we do cucumbers—with pepper, oil and salt—and some eat them stewed in sauces."

1731.—**Horse-hoeing Husbandry** published by Jethro Tull, of Berkshire, England.

1732.—**Poor Richard's Almanac** first published by Benjamin Franklin at Philadelphia.

1732.—John Kirby, traveler in England, writing of the Suffolk **Red Felled cattle** district, said that the butter "was justly esteemed and the pleasantest in England."

1732.—In Maryland **tobacco** was made **legal tender** at the rate of one English penny (two cents) per pound for all debts; including customs dues, the salaries of state officers and ministers of the gospel.

1732.—Justice Dudley, of Massachusetts, writing in this year, says: "An onion set out for seed would rise to four feet nine inches, and a parsnip would reach eight feet."

1735.—The **Pompone** roses found growing wild by a gardener of Dijon, in France, while cutting wood on a mountain near the city.

1735.—A stallion named **Old Traveler**, owned by Mr. Osbaldeston, of North England, ancestor of **Cleveland Bays**.

1737.—The **Studley bull** dropped in this year became one of the first great stock getters of the **Shorthorn breed**.

1737.—Hugh Orr, a Scotchman by birth, arrived in Massachusetts and erected a **trip hammer** at Bridgewater for the manufacture of scythes and axes and acquired a wide reputation.

1740.—The **Tarpan**, a **Russian horse**, considered as being the wild ancestor of European horses, described by Guelin as a mouse dun in color, with dark points, short, crisp mane, with a short, bushy tail.

1740.—About this time James Small, of Berwickshire, in Scotland, first introduced **the plow with the cast-iron mouldboard**, still using wrought-iron shares.

1741.—Jolly Roger, a thoroughbred stallion, was foaled in this year. He was known on the English turf as "Roger of the Vale." He was the first horse that gave distinction to the **racing stock of Virginia**, where he was imported and commenced service as a sire in 1748. He was by Roundhead, who was by Flying Childers, who was by Darley Arabian. The dam of Jolly Roger was got by the famous horse Partner, the best race horse in his day.

1742.—The **Baldwin apple**, a chance seedling, sprang up this year on the farm of Mr. John Ball, in Eastern Massachusetts, and brought into general notice by a Colonel Baldwin, who named it.

1742.—**Hereford cattle** improvement began by Benjamin Tompkins, the elder, of Canon Pyon, Herefordshire, England.

1742.—M. Dubreuil, a planter of New Orleans, invented a **cotton gin**, which was so far successful as to give quite an impulse to cotton raising.

1744.—William Ellis, agricultural writer, commended **Holderness cattle** of Yorkshire for wide bags, short horns and large bodies.

1745.—**Suffolk Punch horses** famous for draft qualities. Norman stallions on Suffolk mares credited with the production of the breed.

1745.—Beet-root sugar discovered by Marggraf, a German chemist.

1747.—James Elliott, a clergyman of Connecticut, published a series of valuable essays on "**Field Husbandry**."

1747.—**Agricultural seeds** first sold commercially in the United States about this time.

1747.—"**Memoirs on Wool**," first publication of its class in Great Britain.

1748.—Rev. Jared Eliot, in a book on **farm husbandry**, urges the growth of clover for the reason that an acre of it would produce two bushels of seed, worth thirty-five pounds in the currency of that period.

1748.—In this year the Province of New

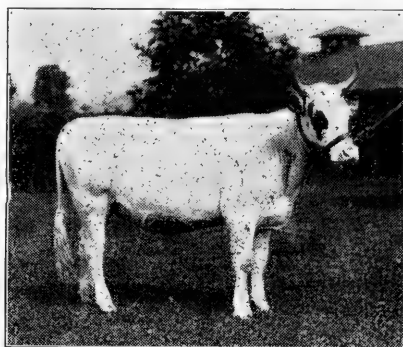
Jersey passed a law requiring that **trotting and pacing races** be held only at Fairs.

1750.—First act of Parliament for **collecting tolls** on the highway of Scotland.

1750 (about).—James, the Vith, Duke of Hamilton, introduced a Flemish stallion for use of his tenantry in Clyde Valley, Scotland. This is said to be the origin of Clydesdale horses, but is disputed.

1750 (about).—The commercial history of the **peppermint plant** began at Mitcham, in Surrey, England.

1750.—**Red clover** known to be grown in Rhode Island as early as this year.



WILLOWMOOR BROWNIE—AYRSHIRE HEIFER. Champion junior female at the National Dairy Show of 1911; daughter of Netherhall Brownie, 9th, world's champion Ayrshire cow. Bred and owned by Willowmoor Farms, Redmond, state of Washington.

1750.—About this time the Earl of Marchmont purchased from the Bishop of Durham and carried to his estates in Berwickshire, Scotland, several brown cows spotted with white. These were the foundation cows of the **Ayrshire** breed of cattle.

1750.—A berry having a pleasant pineapple-like aroma arrived in England from Chili, South America, under the name of **Pine strawberry**. Credited with being improver of wild berries.

1751.—Jesuit Fathers brought to Louisiana samples of **sugar cane** for the purpose of adding to the resources of the colony. This is now called "Creole" cane.

1752.—**Lightning conductors** first used for protection of buildings.

1752.—The French government offered to **purchase all the tobacco** raised in the province of Louisiana at a price equivalent to seven cents per pound.

1753.—The year usually taken as the **beginning of botany**. Linnaeus grouped all the tulips, which he named under the classification of Tulipa Gesneriana.

1754.—In this year a **Galloway horse** owned by a Mr. Crocker went an hundred miles a day for three days over the Newmarket Course in England and showed no distress. The Galloway was a hardy cob horse, the breed originating in Scotland, but is now extinct.

1754.—The best known of the **Cape jasmines** (which are not related to the true jasmines) is the *Gardena florida*, and was introduced into England from China in this year.

1755.—From **silk** manufactured near Charleston, S. C., in this year, three dresses were made in England—one presented to the Princess Dowager of Wales, another to Lord Chesterfield, and the third to a person, name not given.

1756.—Marggraf, a German chemist, found the **sugar beet** contained only 1.5 per cent. of sugar, which is increased to an average of 13 per cent. by selection and improved methods of cultivation.

1759.—First **sugar house** equipped with machinery erected at New Orleans by Dutreuil.

1759.—The **Bird's-foot violet** was sent to the Apothecaries' Gardens, at Chelsea, near London, as early as this year—probably by John Bartram, of Philadelphia, an eminent botanist, who sent many plants to England.

1760.—Commencement of memorable improvement in **British agriculture**.

1760.—The cow "Tripes." **Shorthorn cow**, bought by Thomas Hall, in England, earliest recorded cow of the Shorthorn breed.

1760.—First known **commercial nursery** in this country established by William Prince, of Flushing, Long Island. Pioneer of the industry, and published a catalogue of fruits.

1760.—McCullough's Statistics of the British Empire records that in this year William Dawson introduced the custom of **plowing two horses abreast** with lines.

1760.—In the list of **flower seeds** published in a Boston newspaper advertisement this year are those of the marigold, sensitive plant, branching larkspur, white and yellow chrysanthemum, sweet peas, tall hollyhock, pink, Sweet William and French honeysuckle.

1761.—The first known **veterinary school** established at Lyons, France.

1761.—First exact knowledge of **hybrids** obtained from a work by Koelreuter, a scientist.

1762.—Fahrenheit used ice and salt mixture in fixing scale for the **thermometer** which bears his name.

1763.—Bartram in his "Travels" mentions having seen in this year near Mosquito Inlet, Florida, a ridge a half mile wide and forty miles long, which was one dense **orange grove**.

1763.—Nathaniel Bird, a book dealer, advertised in the Newport (R. I.) Mercury that he had **garden seeds for sale** just arrived from England. This is one of the earliest records of seeds being for sale.

1763.—In this year Laclede, Maxon & Co. established the first **fur-trading depot** at St. Louis, Mo. The brothers Auguste and Pierre Chouteau were connected with it. In those days the farmers tributary to St. Louis were hunters and trappers.

1763.—In his book entitled "The History of the Jersey Cow in America," by Valancey E. Fuller, he said: "From the evidence I think it may be claimed that as early as 1763 the purity of the **Jersey cattle breed** was a subject of great care, and it has been scrupulously guarded till this day, with the possible exception of an isolated cross of the Guernsey."

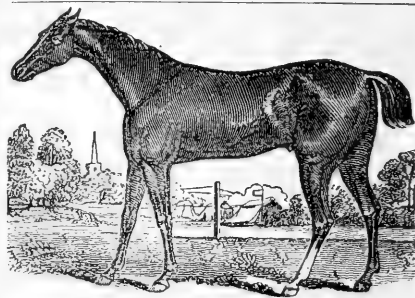


JERSEY COW—MARY ANNE OF ST. LAMBERT. 36 pounds 12 ounces of butter in one week; 836 pounds in one year. Owned at that time by Valancey E. Fuller, of Hamilton, Ontario, Canada. From Schreiber photo, 1882.

1764.—Alexander Garden, Scotch scientist, of Charleston, S. C., published an account of **pink-root**, the use of which as a vermifuge he had introduced. The botanical genus *Gardenia* was named in honor of Mr. Garden.

1764.—Gideon Welles announced in the Newport (R. I.) Mercury that he had some choice Connecticut **onion seed** for sale.

1764.—Mr. Dawson, of Frogden, believed to be the first in Scotland to grow **turnips for stock** to a large extent.



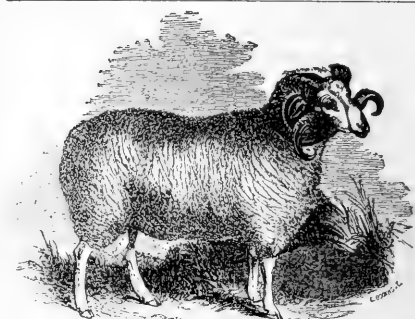
ECLIPSE—The Thoroughbred.

1761.—Eclipse foaled during the eclipse of that year; the most **wonderful horse** ever produced on the English turf; bred by the Duke of Cumberland; got by Marske, a grandson of Bartlett's Childers, out of Spilletta. "He puffed and blowed like an otter and galloped as wide as a barn door." —Lawrence.

1764.—Improved **cotton-spinning machinery** invented in England by Hargreaves.

1764.—First **greenhouse** on modern plans in this country constructed in New York.

1765.—The London (England) Society of Arts awarded a gold medal to Benjamin Gale, of Killingworth, Conn., for a **drill plow**, the invention of which was claimed by Benoni Hilliard, of the same place.



A SAXONY MERINO RAM.—A picture representing this fine-wool **Merino breed**, which at one time was a rival of the Spanish Merino in America. This picture represents a ram of the early importations from Saxony.

1765.—George Washington received a pair of blooded pigs from the Duke of Bedford, called **Bedford breed**.

1765.—**Merino sheep** introduced into Germany by grant of the King of Spain to the Elector of Saxony.

1765.—Saxon Merino sheep originated by flock of 300 **Spanish Merinos** sent by King Louis, XV., of France, at the request of his brother-in-law, Prince Xavier.

1766.—In this year samples of home-made **scythes, shovels, spades, hoes, etc.**, were laid before the Society of Arts in New York and approved.

1766.—John Wynn Baker, of Kildare, in Ireland, commenced a system of **rural-economy experiments** and showed by actual experiment that the saving effected by the drill and horse hoe amounted in fifteen years to the fee simple (value) of all the cultivated lands in the kingdom.

1766.—**Field seeds** first advertised in the New England Gazette.

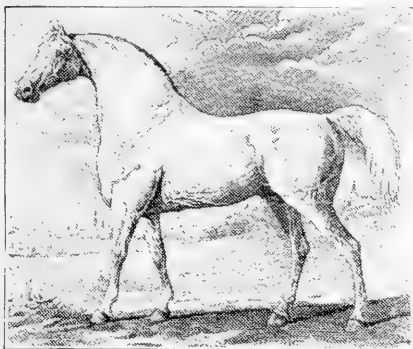
1767.—William Dunbar, a New England gardener, advertised **seeds for sale** as follows: Peas and beans, 30 shillings per

quart; Strasburg onions and orange carrots, 25 shillings per ounce; early cabbage, 40 shillings per ounce; and "Culliflower," 6 pounds per ounce. He also sold flower seeds.

1767.—M. Buring, a Berlin merchant, laid a plan before the King of Prussia, which led to the organization of **Land Mortgage Associations in Germany**, the first organized in Brandenburg in 1830.

1767.—In the Boston Gazette of this year six out of twenty-six advertisers were dealers in seeds.

1767.—Discovery by Sprengel of **fertilization of plants**.



ENGLISH MAMBRINO—Thoroughbred.

1768.—English Mambrino, a grey horse, sire of Messenger, was foaled in this year. Mambrino was a thoroughbred, and is the fountain head of the **American trotter**. His son, Messenger, was reputed as being the best horse ever brought to America.

1768.—This is the date generally agreed upon when the father of Hugh Watson, of Keillor, Scotland, first began gathering the cattle which were afterwards known as the original herd in the establishment of the **Aberdeen-Angus** breed.

1768.—Messrs. Culley settled on the Northumbrian side of the river Tweed. Great **improvers of agriculture** in border counties of England and Scotland.

1769.—Edward Antill, of Monmouth, N. J., wrote the first **American treatise on the grapevine**.

1769.—The French settlers of Kaskaskia, Southern Illinois, made **110 hogsheds of wine** from wild grapes.

1769.—"Eclipse first, the rest nowhere." Eclipse first on turf this year, and for seventeen months won every race, closing his career by walking over the Newmarket course for the King's plate. His full speed was never tested, no horse ever having put it to the proof.

1769.—Olive trees planted at San Diego, Calif., still in bearing.

1769.—First investigation of **pleuro-pneumonia in cattle** by Bourgelat, the founder of veterinary schools, brought about by prevalence of the disease in Europe.

1770.—First **plantings of grape** at the Mission of San Gabriel, in California.

1770.—The popular **Bartlett pear** originated in England, it being propagated by a nurseryman named Williams; but, having been disseminated in this country by Enoch Bartlett, it thus acquired its new name.

1771.—The great **fringed orchis** first made known to botanists through D. Pitcairn, who introduced it into the Kew gardens from Newfoundland.

1771.—Silk culture begun in Pennsylvania and New Jersey. It was interrupted by the Revolutionary War, and only revived in a small way after the treaty of peace.

1771.—Baron William Stiegel, who came to America twenty-one years before, gave the land for a church at Manheim, Pa, this

clause being in the indenture: "Yielding and paying therefor unto the said Henry William Stiegel, his heirs and assigns, of the said town of Manheim, in the month of June, yearly, forever hereafter, the **rent of one red rose**, if the same shall be lawfully demanded."

1772.—Priestley's treatise on **breathing of plants** issued in this year.

1772.—To Mrs. Martin Logan, daughter of Robert Daniel, a Governor of North Carolina, is accorded the credit of publishing the first **American treatise on gardening**, which was written in her seventieth year.

1772.—In Philadelphia, this year, Peteliah Webster sold clover and duck grass seed, being one of the earliest in the **seed business** in that city.

1772.—**Nitrogen** discovered by Rutherford in this year.

1773.—James Vaux, of Pennsylvania, **imported clover seed** from England because it was difficult to obtain in America.

1773.—One of the early **veterinary colleges** established at Copenhagen, in Denmark.

1773.—**Spanish sheep** introduced on the Pacific coast of the United States; same kind as in Florida.

1773.—An **iron plow** was presented to the Society of Arts in London, England, by a Mr. Brand.

1774.—During the Revolutionary War, Kinsey Borden, of St. Paul's Parish, South Carolina, invented a **roller gin** for the cleaning of long-staple and silky cotton, of which he was a large grower.

1775.—Empress Maria Theresa of Austria imported several hundred **Saxony Merino sheep** and placed them in Hungary at Mereopail, where an agricultural school was established.

1775.—The **Cherokee rose**, a Chinese species, known to have been cultivated at this time in the Southern States.

1775.—Improvement in **cotton-spinning machinery** by Dr. Cartwright in England.

1775.—**Bartram's tree orchis**, the first of its kind found in the Middle States, introduced into Fothergill's gardens, in London, it having been discovered in Florida a year or two before.

1775.—James Longhead advertised seeds in Philadelphia, saying that he kept "a quantity of the largest kind of **collyflower seed**, found on trial to be extraordinary good."

1775.—Count Orloff Tschismensky, a lover of horses, imported the grey **Arabian stallion Smetanxa**, and, crossing on Danish, Dutch and English mares, originated the breed of Russian trotters.



SOUTHDOWN WETHER—GRAND CHAMPION, WESTERN NATIONAL SHOW, DENVER, COLO., 1912. Exhibited by the Agricultural College, Fort Collins, Colorado.

1775.—Improvement in **Southdown sheep** began about this time.

1775.—The first **Austrian veterinary college** established at Vienna.

1776.—The first **artificial road** in America was built in this year, from Philadelphia to New York.

1776.—In New York City, Samuel Deall, a dealer in merchandise on Broad street, kept a general **assortment of seeds**, including red clover, grass and "Saintfoine," for improvement of land.

1776.—M. de Trudaine introduced **Merino sheep** in France.

1776, July 4.—**Declaration of Independence.**

1776.—The famous French **nurseries** at Ussy, afterwards acquired by Levasseur & Sons, established by Mons. Turgot, Comptroller General of France under Louis XIV.

1777.—Poll tax levied for Baltimore county and city fixed at 172 pounds of tobacco. One of the latest **payments of taxes in produce.**

1777.—Highland (Agricultural) Society of Scotland instituted.

1777.—Bath and West of England (Agricultural) Society established.

1777.—Large importation of **Spanish Merino sheep** by the people of Saxony.

1777.—John Bartram, born in 1699, died in this year. He was called the "**Father of American Botany.**" He founded at Kingsessing the first American Botanical Garden and published many valuable writings on botanical subjects.

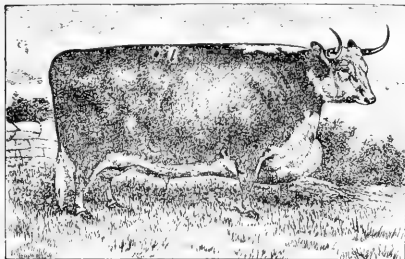
1779.—The inhabitants of New England obtained their first **sweet corn** from the Indians in this year.

1779.—In this year the expedition of General Sullivan against the Six Nations in the Genesee country, New York, ascertained that the **Indians had fields of corn**, and gardens of beans, peas, turnips, cabbages, melons, carrots, parsnips and potatoes.

1779.—**Tomatoes** first used in catsup in New Orleans about this time.

1779.—An **early sweet corn** introduced into Connecticut by an officer of the army returning from an expedition against the Indians in the Genesee country.

1779.—Improvements in **cotton-spinning machinery** in England by Compton.



The Smithfield beef champion.

1779.—J. H. Campbell, of Charlton Kent, England, fed and exhibited a famous **Hereford ox** at Greenwich. Live weight, 3,363 pounds; fore quarters, 1,016 pounds; hind quarters, 896 pounds; dressed weight, 1,912 pounds.

1780, May 1th.—This was the first **Derby Day in England.** The race was won by Diomed, the property of Sir Charles Bunbury. All the competitors were colts. The distance was one mile.

1780.—Imported **Messenger** (a thoroughbred), foaled in 1780, imported to the United States in 1788 and died in 1808. He was of Arabian descent. First in list of original sources of American trotting blood. Great-grand sire of Rysdick's Hambletonian.

1780.—William Pitt, of Pendeford, England, invented a **reaping machine** suggested by the description of Pliny and Palladius.

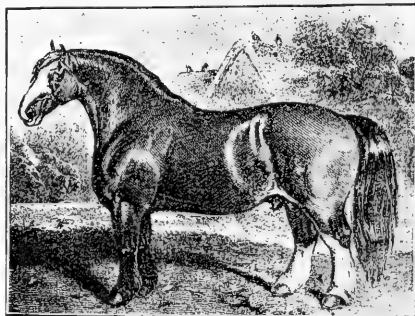
This was described in Young's Annals of Agriculture in 1787.

1780.—Practice of **drilling and horse-hoeing** crops introduced into Northumberland.

1780.—Mr. John Ellman, of Glynde Farm, near Lewis in Sussex, England, commenced breeding and improvement of **Southdown sheep.** Continued fifty-two years.

1782.—The **Mango** reached the West Indies from Brazil and soon became naturalized.

1783.—London Society for the Encouragement of Arts, Manufactures and Commerce called public attention to the existence and value of **cotton-seed oil.**



A Clydesdale stallion.

1783.—Exhibition of stallions at Edinburg, Scotland. Highest prize won by "Blaze," first horse causing marked improvement in **Clydesdales.**

1783.—John Gough & Miller **Shorthorn cattle** importation via Baltimore to Virginia.

1783, September 3d.—**Peace in America** after eight years of war for independence.

1783.—"Hubback," a great foundation bull of **Shorthorn family**, bought by Robert Colling and Mr. Waistell of Mr. Fawcett, near Darlington, England. This bull was the greatest factor in Shorthorn cattle improvement. Had been used before the discovery of his merits for service at one shilling per cow.

1784.—**Plow with cast-iron mold board** and wrought and cast-iron shares invented by James Small, of Scotland.

1784.—David Landreth established himself near Philadelphia in market gardening, nursery and **seed-growing** business.

1784, August 2d.—The first **mail coach** in history started from London to Bristol, in England.

1784.—Charles Colling, of Ketton Hall, England, bought a cow at Darlington market of Thomas Appleby for \$85, which he afterwards named **Duchess**—original stock cow of the famous **Shorthorn Duchesses.**

1784.—First **exportation of cotton**, eight bags, weighing in all 1,200 pounds.

1785.—**Power loom** added to inventions for manufacturing cotton goods by Dr. Cartwright, of England, greatly increasing the demand for raw cotton.

1785.—First organization of **American agricultural societies** at Philadelphia, then the National Capital. George Washington, Benjamin Franklin and Timothy Pickering, prominent members.

1785.—Robert Ransome, of Ipswich, England, introduced **plows with cast-iron shares.**

1786.—Before this year cotton was a domestic manufacture amongst Southern planters. A letter from Thomas Jefferson said: "The four southernmost states make a **great deal of cotton.** Their poor are almost entirely clothed with it in winter and summer."

1786.—Franz Karl Achard, German chemist, discovered the true method of **separating the sugar** from the sugar-beet plant.

1786.—**Sea Island cotton** introduced in Georgia from the West Indies.

1786.—Mrs. Colling, wife of Mr. Charles Colling, of Shorthorn breeding fame, first known and recognized as cattle breeder, or, in modern terms, a **Cattle Queen**.

1786.—The French government purchased 300 sheep from Spain, the foundation of the French (Rambouillet) Merino.

1787.—The King of Spain presented a jack and jennet to General George Washington. The jack was called the Royal Gift.

1787.—A mill for the manufacture of cotton erected at Beverly, Mass.

1787.—A mill for the manufacture of cotton was erected on James Island, South Carolina.

1788.—In this year a Mr. Blisset, of Georgia, contrived a **cotton-gin** having two rollers revolving in opposite directions by which five pounds of cleaned cotton were made per day.

1788.—President Stiles, of Yale, wore at the commencement exercises, this year, a **silk gown** from material made and woven in Connecticut.

1788.—As early as this date the American **scarlet rose-mallow**, said by Meehan to be "the most gorgeous of all the plants indigenous to the United States," was mentioned in Walter's "Flora Caroliniana."

1788.—First extensive production of **Sea Island cotton**. Thomas Proctor raised 5,000 pounds upon a plantation near Savannah, Ga.

1788.—Swedish turnip and potato 'oat added to **farm crops** in England and Scotland.

1788.—King George, III., introduced **Merino sheep** in England. They did not thrive in that country.

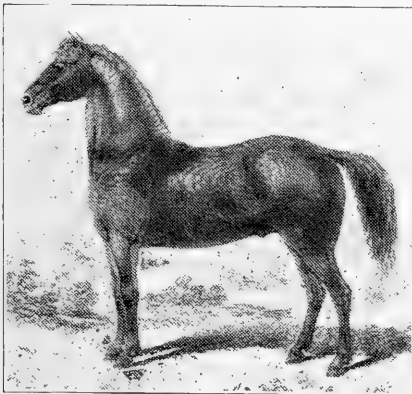
1789.—First authentic notice of **Jersey cattle** by the Legislature of the Jersey Island passing an act to keep out fraudulent cows from France.

1789.—George Washington, President of the United States, and served eight years, to 1797.

1789.—Jussieu founds the **Natural System of Plants**.

1789.—**Eclipse**, the peerless thoroughbred, died at the age of 25. He was sire of 334 winners at the race course. Owned by Mr. O. Kelly.

1789.—General Lafayette presented a fine **Maltese jack** to General Washington, named the Knight of Malta.



The foundation sire of the Morgan breed.

1789.—Justin Morgan, famous horse, parent sire of **Morgan horses**, foaled this year at Springfield, Mass.; died in 1821; was moved to Randolph, Vt. Justin Morgan was descended from the English thoroughbred, also from Arabians and Turks. No Morgan horse can be registered without one sixty-fourth of his blood in the male line.

1789.—Commodore Gardner sent **orchid plants** of *Epidendrum* fragrant from the woods of Jamaica. One flowered two years after and was the first orchid figured in the Botanical Magazine.



TORMENTOR—A typical Jersey bull.

1789.—On the **Island of Jersey** an act of the local Legislature prohibited the importation of any foreign breed of cattle.

1790.—A **cotton mill**, driven by water, with ginning, carding and other machines, also spinning machines with eighty-four spindles each, put in operation at Statesburg, S. C.

1790.—Great improvement in the **treadle cotton gin** made by Joseph Eve, of Providence, R. I., then residing in the Bahamas.

1790.—Almy & Brown established a **cotton mill** at Pawtucket, R. I. In the same year a mill was erected in South Carolina.

1790.—Successful attempt to grow **Sea Island cotton** in the United States by Mr. Wm. Elliott, near Beaufort, S. C. Seed procured from the Bahamas Islands.

1790.—Small's **swing plow** and Meikle's **threshing machine** brought into general use.

1790.—When Alexander Hamilton was Secretary of State under George Washington as President, the **exports of tobacco** constituted 21.5 per cent. of all exports, and only second in importance to flour.

1790.—Goethe writes on the **metamorphosis of plants**.

1790.—Thomas Booth, founder of a **Shorthorn cattle** family, commenced breeding at Killerby, in Yorkshire.

1790.—The **New England Farmer**, a volume of over 306 pages, published at Worcester, Mass.

1790.—The first **Prussian veterinary college** established in Berlin.

1790.—The Hugarian government established a stud of **Arab horses** at Babilna, under the Department of Agriculture, for the purpose of raising army horses.

1791.—In this year Mr. Heaton, a butcher, who had settled in New York about 1775, imported some **Shorthorn cattle** from the herd of Mr. George Culley, of Northumberland. What became of them is unknown.

1791, February 26th.—New York Society For the **Promotion of Agriculture, Arts and Manufactures** organized on this date.

1791.—**Agricultural society** formed at Kennebec, Mass. (now Kennebec, Me.).

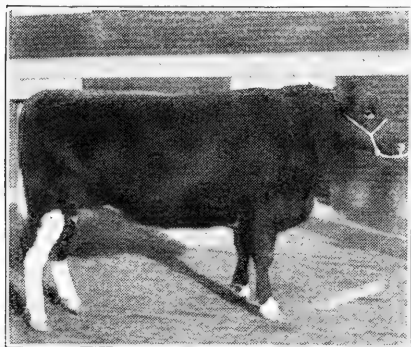
1791.—According to Dr. Elwood Harvey, in an essay on the **American trotting horse**, trotting as a sport began in England in this year. He mentions an account of a brown mare, eighteen years old, that trotted sixteen miles on the Essex Road in fifty-eight minutes.

1791.—**Otter sheep**, with a long body and short, crooked legs, originated from a malformed twin ram. Efforts were made to preserve this sporadic variety on account of its inability to run and jump and thus escape from an enclosure. In the Eastern States it promised to become a distinct species, but it has disappeared. Imagining that the ewe had been frightened by an otter (then occasionally seen in the vicinity) people called it the **Otter sheep**. This statement is from Harper's Book of Facts.

1791.—The first English veterinary college established in London.

1791.—Four Spanish Merino rams received into the United States, one ram supposed to have been used in the vicinity of Delaware until 1808.

1792, March 7th.—Western Society of Middlesex Husbandmen formed in Massachusetts.



BUTTONWOOD DICK, 7th—CHAMPION RED POLLED STEER, CHICAGO LIVE STOCK EXPOSITION OF 1911. Exhibited by the Iowa State College, Ames, Iowa.

1792.—Pierre Legaux, a Frenchman, together with a number of Philadelphia people, set out a vineyard at Springmill, on the Schuylkill river.

1792, April 11th.—The New York Legislature appropriated a sum for the Columbia College to endow an agricultural professorship.

1792.—As an experiment Mr. Charles Colling, Shorthorn cattle breeder, used a bull which was half Shorthorn and half Gallo-way. This was called the "alloy" strain and was afterwards bred out.

1792.—Arthur Young, of West Suffolk, in England, mentions "universally Polled cattle, red, brindel or yellowish-cream color, famous for their quantity of milk;" the original Red Polled cattle.

1792.—British Wool Society of England mentions sheep of Morfe common near Bridgnorth, spotted-faced Polled breed, origin of Shropshires.

1793.—Vineyards planted in Jessamine county, Kentucky, by a colony of Swiss grape growers.

1793.—The Macartney rose brought to England from China by Lord Macartney.



YOUNG ALICE'S PRINCE.—A St. Louis World's Fair champion Shorthorn bull.

1793.—"Favorite," Shorthorn bull, calved this year, was an inbred bull and was used to inbreed to an extraordinary extent. His son by his own dam, the bull "Comet," was the first of the Shorthorn breed to sell at \$5,000.

1793, February 27th.—By act of Congress, breeding and useful animals were admitted into this country free of import duty.

1793.—Eli Whitney's cotton gin invented, greatest stimulus to cotton production in this country.

1793.—It appears that the invention of the cotton gin not only stimulated cotton production, but it also made cotton a competitor to flax, checking the production of flax for fiber and indirectly causing more attention to be paid to flax seed as a commercial product.

1793.—National Board of Agriculture of Great Britain organized. Sir John Sinclair principal advocate.

1793.—Hon. Wm. Foster, of Boston, imported two Merino ewes and one ram from Cadiz. He presented them to a friend, who killed and ate them.

1793.—South African white-haired ewes crossed with imported Spanish Merino rams, same being from the royal flock of King George, III., of England.

1793.—The latest form of foot or treadle gin for cotton was introduced in Georgia from the Bahamas.

1794.—According to the 1860 United States Census, a French traveler named Volney went to see all the American vineyards he could hear of in this year, even so far as Kaskaskia, on the Mississippi river, where he was informed that the Jesuits had planted a vineyard, but that the French government had ordered or influenced its destruction to prevent French grapes growing in America.

1794.—Society for Promoting Agriculture in the state of Connecticut organized.

1794.—Arthur Young published a book entitled "A Survey of Suffolk," in England, and mentions the hornless cattle of that country, saying: "There is hardly a dairy of any consideration in this district which does not contain cows which give in the height of the season eight gallons of milk a day and six are common among many for a large part of the season. For two or three months a whole dairy will give five gallons a day on the average."

1794.—In this year, a writer named Rawlin, in speaking of the cattle of Ayrshire, said: "They have another breed, called the Dunlop, which are allowed to be the best race for giving milk of any cows in Great Britain or Ireland, not only for large quantity, but for richness and quality." The Dunlops are a family of the Ayrshire breed of cattle.

1794.—Matthew Patten removed from Hardy county, Virginia, to Kentucky, and carried with him some English cattle which he had bought of a Mr. Goff, of Maryland.

1794.—The Shaker Community at Mount Lebanon, N. Y., began growing farm seeds and developed a large trade in them.

1795.—One of the earliest seed farms was established at Enfield, N. H., in this year.

1795.—Sieur Etienne De Bore, of Louisiana, announced that he had discovered a process necessary to obtain grained sugar. He demonstrated it on his plantation.

1795.—In this year Nicholas Appert, a Frenchman, discovered the art of hermetical sealing of food, now well known under the title of canning. Fourteen years later he was awarded a prize by the government, which had been offered, long before, for a method that would preserve alimentary substances without robbing them of their natural qualities and juices.

1796.—Charles Colling, breeder of Shorthorn cattle, exhibited a steer in England and Scotland known as the "Durham ox;" weighed 3,024 pounds at six years old.

1796, December 7th.—In his message to Congress President Washington recommended pecuniary encouragement for the establishment of institutions to promote agricultural interests.

1796.—In Lancaster county, Pennsylvania, an outbreak of **cattle fever** was caused by South Carolina cattle being brought in and sold there. First report of splenic cattle fever, afterwards attributed to the ticks in Southern cattle.

1796.—Mr. John Ellman, of Glynde, Sussex, England, called a meeting at the town of Lewes to collect money for prizes to be awarded successful breeders, which action led to the formation of the **Sussex Agricultural Society**.

1796.—Owing to the deficient harvest and foreign wars, **English wheat** rose from ordinary price of fifty shillings per quarter to ninety-six shillings per quarter.

1796.—In this year, according to the American Shepherd by L. A. Morrell, an exhibit of wool was made at Rambouillet, in France, in order to boom the **Rambouillet breed of sheep**, of which the French government had a monopoly. A large number of manufacturers and dealers in wool attended the exhibit and unanimously agreed that the wool on exhibit there was the finest, longest, softest and strongest they had ever seen, but they promptly got together and formed a combination to keep down the price.

1797.—John Adams, **President of the United States**, and served four years.

1797.—Trustees of Massachusetts Agricultural Society commenced **issuing tracts or bulletins**.

1797.—Letters patent, signed by John Adams, President, were issued in June of this year to Charles Newbold, of New Jersey, who invented the first **cast-iron plow** ever made in America. Strange to say, the farmers had an idea that the cast-iron plow poisoned the land and promoted the growth of rocks!

1797.—In this year, from the flock of Colonel Gordon, twenty-nine **Spanish Merino sheep** were taken from Cape Colony, South Africa, to establish the fine wool flocks of New South Wales, Australia.

1798.—Robert Colling, breeder and improver of Shorthorn cattle, exhibited a beautiful pure-bred heifer, known as "**the white heifer that traveled**." Estimated live weight, 2,390 pounds.

1798.—In this year Thomas Jefferson wrote an essay in which he discussed the best form and curvature of the **mold board of plows**, this being as far as known the first attempt in this country to apply scientific principles to such a problem.

1798.—The **tomato** first brought to Philadelphia from Santo Domingo, but not regarded as a marketable product.

1798.—The Shaker Community at Watervliet, N. Y., made **brooms of broom corn**.

1798.—In this year, in Kentucky, was begun the **Dufours vineyard**, where the first great American grape, the Cape—an offshoot of the fox-grape—was propagated. This grape was popular in the early half of the nineteenth century.

1798.—Smithfield (London) Club organized. Duke of Bedford, President; Arthur Young, Secretary. Object, to promote improvement in cattle. **Annual Cattle Show** instituted; first exhibition the following year.

1798.—The **McIntosh apple**, a winter variety of Northern origin, discovered by John McIntosh, of Dundela, Ontario, Canada.

1799. July 4th.—The first patent for a **reaping machine** in England was granted to Joseph Boyce, of Pine Apple Place, at Mary-le-bone, a northwestern suburb of London.

1799.—On the 13th day of October a **trotting match** was decided on Sunbury Common, England, between Mr. Dixon's brown gelding and Mr. Bishop's grey gelding, each carrying 168 pounds. The race was won in 27 minutes 10 seconds. The distance is not stated, but the time shows that it was a trial of endurance as well as speed. This item is from the book by Dr. Elwood Harvey.

1799.—First **Tunis sheep** imported into this country from Africa by Gen. Wm. Eaton, United States Consul. He sent ten head on the ship *Sophia*, bound for the United States. One ram and one ewe only survived the voyage. This pair was bred under care of Judge Richard Peters, of

Belmont, near Philadelphia, until he had a fine flock. The imported pair were finally killed by dogs, the ewe raising her last lamb at the age of sixteen years.

1799.—Old **Diomedé**, a thoroughbred, the first **Derby winner in England**, imported into Virginia at the age of twenty years. Father of the American saddle horse.

1799.—Mr. John Westear, of Creslow, Bucks, England, commenced attending and exhibiting at **Boreford Fairs**. He won twenty-one first prizes in succession at the Smithfield Cattle Show.

1799.—In this year Louis Lesson established a trading post at Montrose, in Lee county, Iowa, and planted near his cabin a **small orchard** of about 100 trees that he brought from St. Charles, Missouri. This is the first authentic record of fruit culture in Iowa.

1799.—One of the earliest works on **horticultural subjects** published in North America was an American edition of "Marshall's Introduction to the Knowledge and Practice of Gardening," issued in Boston in this year.

1800.—Peter J. Curtenius, a large iron founder of New York City, advertised **cast-iron plows**.

1800.—John Patten removed from Kentucky to Chillicothe, Ohio, taking with him some cattle of the **English breed** which his father had moved from Virginia to Kentucky.

1800.—The **Northern Spy**, a famous apple, was originated in New York state about this year.

1800.—In this year **Leicester sheep** were imported into Canada by Rev. Mr. Toofy, of Quebec.

1800.—In this year Mr. Ben Davis began the cultivation of the orchard in which was originated the apple bearing his name. He was born in Prince Edwards county, Virginia, in 1775, and in 1800 removed to Butler county, Kentucky, where he acquired a large tract of land, and up to the outbreak of the Civil War owned about twenty slaves. He was the pioneer apple grower and nurseryman of that section of country, and his long experience in propagating finally produced the **Ben Davis apple**.

1800.—Bernard McMahon, gardener, seedsman and author, opened a **seed store** in Philadelphia.

1800.—Thomas Bates, of Kirkclevington, appears as breeder of **Shorthorn cattle**. This herd was bred and held together fifty years.

1800.—The frigate *Constitution* brought a **Maltese jack** to the United States from her first cruise in the Mediterranean.

1800.—**Farmers' Magazine** established. Edited by Robert Brown, of Markle; continued until 1827. Great help to British agriculture.

1800.—Richard England, of Bingham, and Jonas Reeve, of Wighton, Norfolk, England, commenced the improvement of **Red Polled cattle**.

1800.—In England, Robert Meurs, of Somersetshire, was granted a patent for a **reaping machine** propelled on wheels but worked by hand.

THE NINETEENTH CENTURY.

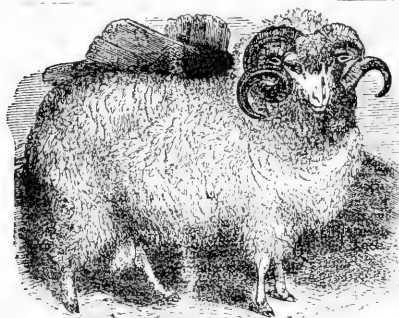
1801.—Thomas Jefferson, President of the United States, and served eight years, to 1809.

1801.—Edwin Hammond born; died 1870; great improver of **Atwood Merino sheep**.

1801.—A communication to the Massachusetts **Agricultural Society** contained the germ of a movement in behalf of agriculture, resulting in the holding of Fairs. It was recommended that "small bounties be given for certain articles."

1801.—In this year M. Delessert, a French banker, owning a farm near Kingston, N. Y., made an attempt to import some sheep of the **French Rambouillet Merinos**. Unfortunately three out of four perished during the voyage, and the survivor, a ram, was placed on his farm. According to A. L. Morrell, author of the *American Shepherd*, this was the first individual of the breed introduced into this country.

1801.—In October of this year Mr. Seth Adams, of Massachusetts, imported a **Merino ram and ewe from France**. He received an award of \$50 from the Agricultural Society of Massachusetts for the importation of a pair of sheep of superior breed.



SPANISH MERINO RAM.—Picture representing this breed when they were first imported an hundred years ago. The improvement by the American breeder represents three for one in fleece-bearing capacity.

1801.—**Straw or chaff-cutting machine** invented by Lesier.

1801.—It was about this time that an eccentric man, known as "Johnny Applesseed," began planting apple seed throughout Indiana and adjacent territory. His method was to scatter them broadcast, and he lived to see 100,000 acres in orchards of his plantings.

1802.—John Biddis, of Pennsylvania, secured in this country a patent for **making potato starch**.

1802.—**Tomatoes** introduced at Salem, Mass., by Michelo Corne, an Italian painter, but he had considerable difficulty in persuading people to eat them.

1802.—A Pennsylvanian named Murray emigrated to Buncombe county, North Carolina, ten miles southeast of Asheville, and in this year found the **Catawba grapes** growing wild. This grape was brought into general notice by Major John Adlum, of Georgetown, D. C.

1802.—Mr. Livingston, of New York state, Minister to France, imported two pairs of **Merino sheep**.

1802.—Col. David Humphreys, United States Minister to the Court of Spain, being succeeded by Hon. Chas. Pinckney, was tendered by the King of Spain a customary present to retiring Minister of ten bars of gold, weighing one pound each, but as the law forbids a United States Minister receiving presents from a foreign court, Colonel Humphreys declined it, but requested the privilege of buying and taking 200 **Merino sheep** out of the country. The Spanish Court did not formally grant permission, but allowed the exportation to be made. The sheep were pure Transhumantes or herded sheep, and represent the Spanish Merino sheep in America.

1803.—Levi Thurston employed the first **lift hammer** at Orange, Mass., for the purpose of making scythes.

1803.—A **Shorthorn cow** returned to England from America; the owner also returning to his native country.

1803.—**American cranberry** first grown at Cape Cod, Mass.

1803, April 30th.—**Louisiana Territory** purchased from the French.

1803, May 1st.—The first American patent for a **machine for cutting grain** was issued to Richard French and J. T. Hawkins, of New Jersey. This machine was propelled on three wheels, one of which extended into the grain.

1803, November 19th.—Jedediah Turner, of Cazenovia, N. Y., took out a patent on a **threshing machine** to be operated by horse, ox or wind power, and warranted to thresh 150 bushels of wheat per day.

1803.—Steam engine first used as **threshing power** by Mr. Aitchison, of Drumore, England.

1804.—**Bananas** were first imported into the United States in 1804 by Captain John N. Chetser, of the schooner Reynard, and consisted of thirty bunches.

1804.—Dr. James Mease, in Willich's Domestic Encyclopedia, describes the **Winesap apple** as follows: "Winesap—An autumn fruit of deep red colour, and sweet, sprightly taste; makes excellent cyder. * * * cultivated by Samuel Coles, of Moorestown, New Jersey."

1804.—**Horticultural Society** of London founded by Sir Jos. Banks and associates.

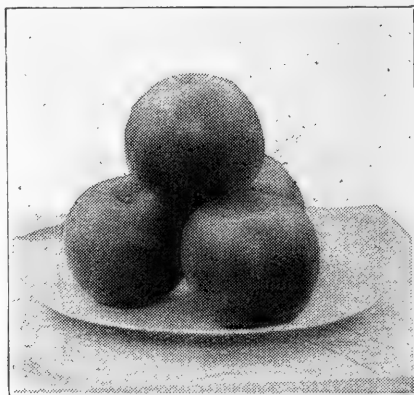
1804.—Mr. John Price, of Ryall, Herefordshire, first bought **Hereford cattle**, breeding continuously until 1841.

1804.—"**The Pennsylvania Farmer**," published in Philadelphia, describes broom corn: "A useful plant, the cheapest and best for making brooms, velvet whisks, etc."

1804.—Dr. Thurston, first United States Commissioner of Patents, proposed that **Fairs** be held on market days at Washington, after the English fashion. First Fair held in October of this year.

1804.—Humboldt writes on **distribution of plants**.

1805.—Ice, now so much used in keeping meats and fruit, began to be exported, the pioneer being Frederick Tudor, of Boston. The first cargo of ice was sent to Martinique.



A tribute to Johnny Applesseed.

1805.—Ground bones began to be used in England as **manure** for turnips.

1805.—In the fall of this year Grant Thurlburn began to **sell seeds** in New York and built up a substantial business.

1805.—In this year record was made of a **perry pear tree** in Holme Lacy, Herefordshire, England. It covered more than half an acre of ground, the branches bending down and taking root, and in turn producing others in the same way. From this tree fifteen hogsheds of perry was made in a single year.

1805.—Thomas J. Plunkett, of Kent, England, received a **patent for a reaper** having the cutting apparatus suspended beneath and in front of the axle and the power behind.

1806.—Publication of Bernard McMahon's **American Gardeners' Calendar**, first recorded history of American horticulture.

1806.—Wm. R. Dickerson, of Steubenville, Ohio, commenced sheep raising by a purchase of **Spanish Merinos** from Mr. James Caldwell, of Pennsylvania.

1806.—Velocity, dam of Bellfounder, trotted on the **Norwich road**, in England, sixteen miles in one hour, and though she broke fifteen times into a gallop and as often turned around, she won her match. Two years later she trotted twenty-eight miles in one hour and forty-seven minutes.

1806.—In France, Napoleon restored government stud establishments destroyed by the revolution.

1806.—What is generally accepted as being the first authentic fast record of American trotters is spoken of. This was 2:59 for a mile trotting, made by the horse "Yankee" (breeding unknown) at Harlem, New York.



PAIR PERCHERON MARES.—Sold to John H. Wray, of Fort Worth, Texas, for \$2,400 by J. Crouch & Son, after winning the highest prizes at the Dallas State Fair, 1911, and at the National Breeders' and Feeders' Show of 1911.

1807.—In this year Lieutenant Zebulon M. Pike, of the United States Army, who had previously explored the West and discovered Pike's Peak, was arrested in Spanish territory as a trespasser and escorted back by way of New and Old Mexico to the sea coast, thence to the United States. In passing through the Mexican province of Durango he found a stock ranch on which 100,000 sheep, cattle and horses were owned by one ranchman.

1807.—In this year Mr. George Culley, of England, published a book entitled "Observations on Live Stock," in which it was stated that Alderney cows were kept by the Nobility for the rich milk which they gave to support the luxury of the tea table.

1807.—The double white Banksian rose introduced into England from China, and named in honor of Lady Banks.

1807.—The Beurre Bose pear raised by Dr. Von Mons and named Calebosse Bose, in honor of a distinguished Belgium cultivator.

1807.—Count Rumford observed that plants deprived of carbonic acid die, and about this time Ingenhousz, another investigator, proved that they absorbed carbonic acid under the influence of sunlight. This led to the general basis of agricultural chemistry, that plants live mainly on inorganic matter.

1807.—Martyn's edition of Miller's "Gardener's Dictionary," published this year, enumerated 124 orchids. The orchids now number about 10,000 species.

1807.—In this year it was reported that a Bates Shorthorn cow (Duchess) gave fourteen quarts of milk twice a day on grass alone, making forty-two ounces (two pounds ten ounces) of butter per day.

1807.—Eleazer Carver, of Bridgewater, Mass., commenced the manufacture of roller gins and saw mills in Mississippi and Louisiana.

1807.—Mr. Basse Muller imported six Merino sheep at Philadelphia from the flock of the Prince of Hesse-Cassel.

1807.—Elkanah Watson, of Massachusetts, beginning with an exhibition of two Merino sheep on the public square at Pittsfield, Mass., soon developed an interest in live stock shows.

1807.—John Macarthur, of New South Wales, Australia, sent home to England samples of his clip, representing the beginning of the Australian wool shipments.

1808.—At the show of the East Norfolk Agricultural Society, Mr. Jonas Beeve, of Wighton, exhibited a Polled bull combining the merits of the Norfolk and Suffolk varieties. First decided movement on improvement of Red Polled cattle.

1808. July 11th.—Samuel Griffith, of St. Louis, who appears to have been a trader in live stock, advertised for good beef cattle suitable for the New Orleans market.

1808.—Commencement of public sheep shearings by George Washington Parke Custis, at Arlington, Va., near Washington, D. C.

1808.—First jack stock imported into the New England States from Cape de Verde Islands.

1808.—Hugh Watson, of Forfarshire, Scotland, commences breeding Aberdeen-Angus cattle, he being nineteen years of age.

1808. December.—Four of the best flocks of Merino sheep in Spain being confiscated by the Junta, were sold at Badajoz to buyers from the United States and England. This was after the second invasion of the French into Spain.

1808.—In this year Hon. Wm. Jarvis imported Merino sheep from Spain. They were Poulars, Aiguerras, Negrettis, Escurials and Monturos. He bred them separately until 1816, when he mixed them all together for the reason that they were very much alike, and he knew of no good reason why they should not be bred together.

1808.—The Hereford bull Wellington calved this year; bred by Benjamin Tompkins, Jr.; one of the famous sires of this breed; sold for \$1,400.

1808.—Mr. Seth Adams moved his Merino sheep from Massachusetts to Muskingum county, Ohio.

1808.—In this year Albert Gallatin mentions a cotton mill as being operated by water power at Petersburg, Va.



CHAMPION ANGORA GOAT owned by R. C. Johnston, Lawrence, Kas.

1809.—In July of this year Col. Richard Peters proposed that the Philadelphia Society for the Promotion of Agriculture establish a manufactory of agricultural implements and a warehouse and repository for receiving and vending them. He stated that no manufactory of agricultural implements in general existed in the United States, although the demand was prodigiously great.

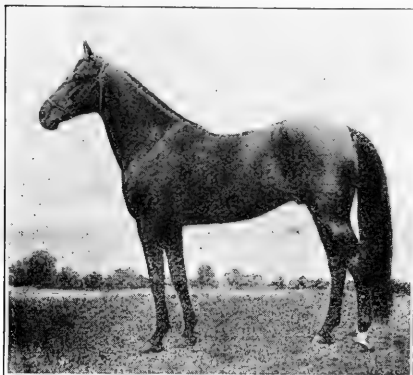
1809.—James Madison, President of the United States, and served eight years.

1809.—Mr. Thomas Rotch migrated from Connecticut to Stark county, Ohio, with a few Merino sheep.

1809.—Twelve sheep of the Spanish Merino Escorial flock imported by Mr. Jarvis sold for a total of \$15,000.

1809.—The Columbian Agricultural Society instituted; first organization to hold important fairs.

1809.—Mr. Wm. Jarvis, of Vermont, Minister to Portugal, sent home 200 Spanish Merino sheep.



WILLIAM PENN. 2:07½ — A COLT TROTTER. A free-for-all trotter and sire of trotters. Sire of Miss Penn, 2:16; A. Penn, 2:17½; Steel Pen, 2:18¼; Voca, 2:19¼; Silver Pen, 2:15¼; and others. Owned by N. W. Bowen, of Delphi, Ind. From photo by Schreiber, of Philadelphia.

1810. August 25th.—At Philadelphia, "Boston Horse," a chestnut gelding, fourteen years old, trotted one mile in 2:48½, in a sulky, for \$600. This record is vouched for by J. H. Wallace, trotting authority, and now generally accepted as the first reduction of an established time record by an American trotter.

1810.—A well-known firm, Reitz, Van Breda, & Joubert, agriculturists and extended land proprietors in the districts of Bredasdorp and Swellendam, South Africa, made first successful importation to that country of Spanish Merino sheep, there being two bucks and twenty-five ewes in the importation. During the Napoleonic wars in Europe the wool of these sheep sold for 90 cents per pound.

1810.—The making of cheese as a business began in Herkimer county, New York.

1810.—First American cigars made in the United States by Mrs. Prout, wife of a farmer of South Windsor, in the Connecticut Valley.

1810.—Partial sale of Shorthorn cattle by Robert Colling. Sixty-one cattle averaged \$617.94 per head.

1810.—Mr. Seth Adams, of Zanesville, Ohio, sold a pair of Merino sheep to Judge Todd, of Kentucky, for \$1,500.

1810.—Hon. Henry Clay, of Kentucky, introduced fine jacks into that state from Spain.

1810.—Scarcely more than one variety of the Moss rose was known at this time, though now there are more than an hundred.

1810.—The tea plant introduced into Brazil at Rio de Janeiro.

1810.—By this time the invention of Nicholas Appert was used in England for canning fruits and vegetables. In this year an English patent was granted to one Peter Durand for a can made of tin to be used in hermetically sealing food, the patent also covering the use of glass, pottery and other fit material.

1810.—Captain Wm. Smith bought a Shorthorn bull and took it to Fayette county, Kentucky.

1810.—Sale of Shorthorn cattle by Charles Colling at Ketton, England; average for forty-seven head, \$757; top price for the bull Comet, \$5,000. This was the dispersion of one of the greatest herds of cattle in Shorthorn history. The brothers Charles and Robert Colling had separate herds, and this was the first to be dispersed. The Collings were the first great improvers of modern Shorthorn cattle and they were first-class advertisers also by show-yard methods.

1810.—The cranberry first cultivated from wild bog fruit in the vicinity of Cape Cod, Massachusetts.

1810.—In this year Albert Gallatin said of American household manufactures: "By far the greater part of the cotton, flax and woollen goods was manufactured in private families, mostly for their own use and partly for sale."

1810.—Sorghum recommended as a soiling crop under the name of Guinea corn by John Lorrain, in memoirs of Philadelphia Agricultural Society.

1810.—In this year 283 linseed-oil mills were enumerated in the United States, of which 171 were in the state of Pennsylvania.

1811.—The Merino Society organized in England with Sir John Banks as President and fifty-four Vice-Presidents.

1811.—In this year Lord Braybooke, of Audley End, England, established a herd of Alderney cattle with one bull and eight cows which cost \$94.70 per head delivered at his estate.

1811.—Spanish Merino sheep introduced into Silesia by Ferdinand Fischer, of Wirschblatt. They were Nigrette and Infanado Merinos.

1811.—Mr. Abraham Heaton imported Spanish Merino sheep, forty-two head.

1812.—Shorthorn cattle of Virginia importations taken to Ohio.

1812.—This is year in which the state of Louisiana was admitted into the Union.

1812.—Artificial heat first employed in curing tobacco to produce the piebald or spangled tobacco of Virginia to satisfy the foreign demand.

1812.—A Mr. Cox, of England, arrived with a few Shorthorns, taking them into New York state.

1812.—A party of twelve men of St. Louis, under the leadership of Captain McKnight, established what was afterwards called the Santa Fe trail, marvels of the New West.—M. B. Thayer.

1812.—English wheat advanced to 126 shillings and 6 pence per quarter. Highest in history.

1812.—Importations of Leicester sheep by Christopher Dunn, of Albany, N. Y.

1812.—At this time the factory of S. & A. Waters, of Amsterdam, N. Y., was turning out 6,000 scythes annually.

1813.—Foster & Murray, of Pittsburgh, Pa., carried on the manufacture of scythes, sickles, hoes and shovels by steam power.

1813.—Establishment of the famous flock of Stephen Atwood, who was the breeder of Merino sheep for fifty-four years. He started with one ewe bred to a neighbor's buck; result, twins—a buck and ewe lamb.

1813.—The thoroughbred horse imported into Cape Colony, South Africa, by Lord Charles Somerset, who was then Governor of the province.

1813.—Duncan, in his "Farming of Herefordshire," said of the Hereford cattle: "Large size, an athletic form, an unusual

neatness, characterize the true sort; the prevailing color is a reddish brown, with white face."



HEAD OF DEFENDER.—International grand champion steer at Chicago. A pure-bred Hereford.

1814.—The seed of the **Miner plum** planted in Knox county, Tennessee, by William Dodd, an officer under Gen. Andrew Jackson. It went by different names for some time, and it is not certain how it became known as the Miner.

1814.—According to DePronville, a French writer, in this year there were only 124 varieties of roses, but by the advantage of multiplication by seed there are now more than 6,000 varieties.

1814.—Valuable purple and striped variety of **sugar cane** brought to Georgia from the West India Island of St. Eustatius.

1814.—Richard Booth (son of Thomas) commenced breeding **Shorthorn cattle** at Studley, in Yorkshire.

1814.—Mr. Bezaleel Wells, of Fort Steuben, Ohio, bought large numbers of **Merino sheep** from Hon. Wm. Jarvis.

1814.—Texas or **Southern cattle fever**, first mentioned. Dr. James Mease, of Philadelphia, said that cattle from South Carolina so certainly diseased all others with which they mixed in their progress to the North that they were prohibited by the people of Virginia from passing through that state.

1814.—"Let us cultivate the ground, that the poor as well as the rich may be 'filled,' and happiness and peace be established throughout our borders."—On title page of Third Volume Memoirs of the Philadelphia Society For Promoting Agriculture, published by Johnson & Warner.

1814.—In July of this year Jethro Wood, of Scipio, N. Y., was granted a patent for a **cast-iron plow**, having the mould plate, share and landside cast as three parts. This became the foundation of many improvements of later date.

1814.—Mr. Bezaleel Wells, Mr. Patterson, Henry Baldwin and James Ross erected a **woolen factory** at Steubenville, Ohio.

1814, December 28th.—Birth of **Sir John Bennett Lawes**, of Hertfordshire, England, student of agricultural chemistry, whose field and animal experiments are of great service and value throughout the world.

1814.—Nicholson, in the **Farmers' Assistant**, describes modern grasses and mentions that they seed freely.

1815.—**Corn (wheat) laws** of England re-enacted.

1815.—In this year Joseph Loudon Macadam, a Scottish engineer, became Surveyor General of Roads at Bristol, England, and put into practical use the theories he had thought out. This resulted in the invention and development of what is now called the **macadam road**.

1815.—General failures of American woolen manufacturers had disastrous results on the **sheep-raising industry**.

1815.—In this year Louis Downing, of Salem, Mass., moved to Concord, and there began the manufacture of **coaches and wagons**.

1815.—Robert Barclay, of Bury Hill, near Dorking, in England, received **two plows**, sent him by Judge Peters, President of the Agricultural Society of America. When tested against the best English plows, they did the work with two horses which English plows did with four.

1815.—First references to the **cowpeas** as good for forage and soil renovation.

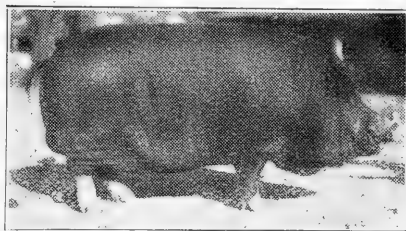
1815.—About this time Ezra Doggett, an Englishman, brought the **secret of canning goods** to America and engaged in packing of hermetically-sealed food and engaged in the business with his son-in-law, Thomas Kensett.

1816.—In this year died, on Boone's Creek, Washington county, Tennessee, a farmer who propagated the **Hoss apple**, sometimes called the "horse" apple. He was Jacob Hoss, great-grandfather of Bishop E. E. Hoss, and came there from Pennsylvania in 1778.

1816.—In this year, at Montreal, Canada, a **French draft horse** was imported that was owned by James McMatt, of Washington county, New York state, as late as 1833. He was called **European** and supposed to be a Percheron.

1816.—The **Oakes cow**, famous in Massachusetts this year, gave forty-four quarts of milk per day; and made 467 pounds of butter in one year.

1816.—The **Isabella grape**, supposed to be a native of Dorchester county, South Carolina, was taken north this year. It was introduced into New York by Mrs. Isabella Gibbs, of Brooklyn, and was named for her. It was the third great **American grape**, being a shoot of the wild fox-grape.



A TYPICAL POLAND-CHINA BOAR.—ROYAL DUDE, as a yearling, weighed 540 pounds. This is one of the champions at the Great St. Louis Fair, which at one time was the greatest Fair of all.

1816.—The "**Big Chinas**," large, white hogs, with sandy spots, taken to Warren county, Ohio, Berkshires following in 1830; Irish Graziers in 1839; and a breed called Byfields. All had something to do towards establishment of the breed of **Poland-China swine**.

1816.—This is known as the year without a summer. The corn crop failed for want of sunshine throughout the country. At Watertown, N. Y., on June 7th, there was ice three-eighths of an inch thick. In Maine, commencing on June 12th, snow fell for three days, and the earth was frozen half an inch deep.

1817.—James Monroe, **President of the United States**, and served eight years.

1817.—In Philadelphia appeared "**The View of the Cultivation of Fruit Trees**," by Wm. Coke, credited as being the first **American pomological book**.

1817.—The **Hessian fly**, so called from the supposition that it was brought to this country in some straw by the Hessian soldiers during the Revolutionary War, scientifically described by the naturalist Thomas Say.

1817.—The "Missouri Intelligencer and Boon's Lick Advertiser," the first newspaper publication in Missouri, printed at Old Franklin, in Howard county. It was necessarily somewhat of a **farmers' paper**.

1817.—First pure-bred **Devon cattle** imported by Mr. Patterson, of Baltimore, from the English herd of the Earl of Leicester.

1817.—First pedigreed **Shorthorn bulls** imported into the United States by Samuel M. Hopkins, of Moscow, N. Y.

1817.—Hon. Henry Clay, of Kentucky, imported **Hereford cattle**, four head.

1817.—Colonel Lewis Sanders, of Kentucky, imported eight **Shorthorn cattle** and four Longhorns.

1817.—Felix Renick, of Kentucky, drove 100 prime fat **Shorthorn steers** to Philadelphia, and sold them for \$134 per head on the beef market. Mr. Renick was the first man to drive cattle over the Allegheny Mountains to the New York market.

1817.—In his book, "View of the Cultivation of Fruit Trees," published in Philadelphia by Mr. Coke, he illustrated and described the **Winesap apple** and characterized it as then "becoming the most favorable cider fruit in West Jersey." This book is considered as being the beginning of systematic pomology in America.

1817.—A few **Longhorn cattle** from England imported into Kentucky, but soon crossed with other breeds and lost sight of.

1817.—The **Noisette rose**, raised by John Champney, of Charleston, S. C., from seed of the Musk rose, fertilized by a bluish China rose. From the seed of this hybrid Philippe Noisette, a florist of Charleston, obtained a rose which was afterwards distributed as Blush Noisette by his brother Louis, of Paris.

1818.—In this year Elisha Mills, from the New England States, established himself as a **pork packer** in Cincinnati. This was the beginning of a great industry in Cincinnati, which gave that city prominence for many years and became for a time the great pork packing center of the country.

1818.—**Crimson clover** introduced into the United States by Beddingfield Hands, of Chestertown, Md.

1818.—Importation of **Devon cattle** from England by Hon. Rufus King, of New York.

1818.—High water on the river Nile, 3½ feet above proper level, destroying crops. First record of **great flood** in modern agriculture.

1818.—Dearborn's **seedling pear** raised this year by H. A. S. Dearborn, of Boston.

1818.—Robert Walker, of Kincardshire, Scotland, commenced breeding **Aberdeen-Angus cattle**, continuing until his death in 1874.

1818.—New York **Horticultural Society** established; first organization of its kind in the United States.

1818.—Mr. James Prentice, of Lexington, Ky., imported bulls of **Shorthorn blood**.

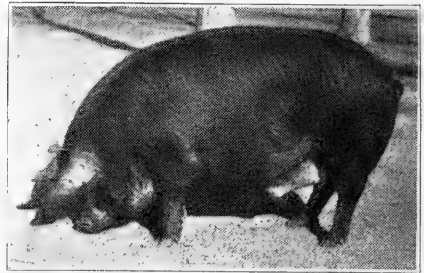
1818.—Sale of **Shorthorn cattle** by Mr. Robert Colling, of Brampton. Sixty-one head averaged \$644.35.

1818.—**Steam engines** on condensing principle erected at East Lothian, Scotland, to propel thrashing machinery. One of these was doing good work fifty-five years later.

1818, September 15th.—Five great abatoids in Paris, France, opened up, where all cattle, hogs and sheep for Parisians were slaughtered. These were the models of the world and had no rivals until in recent years American slaughter and packing houses have surpassed them.

1818.—Porter's Spirit of the Times of December 26th, 1856, says: "The first time ever a horse trotted in public for a stake was in 1818, and that was a match against time for \$1,000. It was a bet that no horse could trot a mile in three minutes. It was

accepted by Major Wm. Jones, of Long Island, and Colonel Bond, of Maryland. The horse named at the post was Boston Blue, who won cleverly and gained great renown. Boston Blue was taken to England, where he trotted eight miles in 28 minutes 55 seconds. He was a rat-tailed, iron-gray gelding, 16 hands high, and nothing is known of his pedigree.



DUROC-JERSEY BARROW — GRAND CHAMPION AT NATIONAL WESTERN SHOW, DENVER, COLO., 1911. Exhibited by the Agricultural College, Fort Collins, Colorado.

1818.—A sea captain, James Jeffries, brought over a pair of **white hogs** showing bluish spots on skin, since known as Bedford hogs, from English county in which they originated. He placed them on his farm at West Chester, Pa.

1819.—In this year **Chevalier barley**, best type for malting, was originated in Suffolk, England.

1819.—First American patent for improvement in **farm hoes** was registered by C. Bulkley, of Colchester, Conn.

1819.—In April, John Stuart Skinner, of Maryland, established **The American Farmer** at Baltimore, the first agricultural journal in America. Thomas Jefferson and Andrew Jackson were patrons.

1819.—The **Bourbon rose** was introduced into France by Jacques, head gardener of the Duke of Orleans, at Neuilly, who received it in 1819 from Breon, Director of the Royal Gardens in the Isle of Bourbon.

1819.—Part of the **Hereford cattle** herd of B. Tompkins, Jr., sold at auction after his death. Average for twenty-eight cattle, \$745 per head; top-price bull, \$2,940; highest-priced cow, \$1,365.

1820.—Charles Mitchell, a London-born Englishman arriving from Scotland, entered the employment of Wm. Underwood & Company, formed for the purpose of engaging in the business of **canning food**.

1820.—In this year, Colebrook, in Litchfield county, Massachusetts, returned the largest manufacture of **scythes** of any town in the United States.

1820.—Appearance of the midge in Vermont, the first insect known to ravage the **wheat crop**.

1820.—At this time the firm of F. F. Farwell & Co., of West Fitchburg, Mass., was making a good reputation as **manufacturers of scythes**, which industry was kept up many years.

1820.—In the Sydney, Australia, Gazette of this year it was reported that in England badly-bred **Australian wools** sold at 40 to 42 cents a pound; light and fairly-bred at 42 to 46 cents; fine heavy wools at 48 cents; the best light wools at 86 to 90 cents a pound.

1820.—Richard W. Meade, Minister to Spain, imported **Merino sheep** from Spain at Philadelphia; principal foundation stock of Delaine Merinos.

1820.—"Young Clydesdale," stallion gained highest premiums at Scotch Agricultural Shows. Sold at five years old for \$600 at zenith of popularity.

1820.—**Alfalfa clover** was tried this year in New York state.

1820.—Dr. Waring made a good edible oil from cotton seed at Columbia, S. C.

1820.—In this year the price of scythes ranged from \$12 to \$18 per dozen.

1820.—Colonel James Ridley, of Davidson county, Tennessee, earliest pioneer jack breeder of that state, bought the jack Comromise in Virginia.

1820.—The census of this year enumerated a population of 9,637,999, including 2,079,446 persons engaged in agriculture.



Successful grape growing.

1820.—The United States Department of Agriculture credits Mr. John Adlum with making the first really successful effort at grape growing on the Atlantic Coast. In this year he planted a vineyard near Georgetown, D. C., consisting of native vines. His introduction of the Catawba variety into general cultivation was the beginning of a new era in grape history.

1820.—A stallion, "Young Rattler," noted for stylish, high-headed appearance and proud-stepping action. Ancestor of French coach horses.

1820.—Steam in closed circuits introduced in greenhouses, followed by hot-water heating.

1820.—Closing out of the Shorthorn herd of Mr. Robert Colling, of Brampton.

1820.—The great Arabian stallion, Gallipolis," imported into France. Great original sire of the Percheron breed.

1820.—Lord Barrington, great early improver of Berkshire swine, commenced selection and breeding.

1821.—A. L. and F. A. Stevens, of Hoboken, N. J., obtained patents for improvements in cast-iron plows, designed to make them easier of draught.

1821.—In this year William M. Muldrow, a famous adventurer, started a drove of milch cows from Palmyra, Mo., to Lord Selkirk's Colony at Manitoba, Canada. The route was a trackless territory infested by Indians, but a remnant of the party with a few cows finally arrived at their destination.

1821.—Philip Dauncey, of England, father of English Jersey cattle breeders, bought a cow which he called "Pug." She gave 11 quarts of milk per day, from which he made 11½ pounds of butter a week.

1821.—Lucerne or alfalfa clover mentioned by a writer in South Carolina as a most valuable soiling crop.

1821.—In this year Thomas Massey, of Delaware, advocated soiling for the dairy, recommending corn as being of great value for the purpose.

1821.—Keene's Seedling, a variety of strawberry, raised by Keene, of Islesworth (near London), the celebrated English strawberry grower.

1821.—In The American Farmer of this year Caleb Kirk described a mill for cleaning clover seed.

1821.—First steam-driven mill for crushing sugar cane erected in Louisiana.

1821.—Wm. Berry, of Washington county, Pennsylvania, purchased a ram and ewes from W. R. Dickinson's flock and established the Black Top Spanish Merino sheep.

1822.—In January of this year, in the Island of Tasmania, the first agricultural society of the new Southern world was organized. Its professed objects were the protection of flocks and herds from the depredations of thieves and irresponsible nomads, and for the encouragement of better moral habits among the population.

1822.—According to Major Henry E. Alford, authority on dairy cattle, the first Ayrshires in America were brought to New York in this year.

1822.—The Easton (Mass.) Spade and Shovel Manufactory commenced by Oliver Ames was making 2,500 dozen shovels annually.

1822.—July 11th of this year records the importation into America of the thoroughbred stallion Bellfounder, bred in the district of Norfolk, England, and bought by James Boot, of Boston, and imported by him. Bellfounder was a bright, beautiful bay, with black legs, fifteen hands high. He was said at the time to be the fastest and best bred horse sent out of England. At five years old he trotted two miles in six minutes and later trotted nine miles in thirty-two minutes, with twenty-two seconds to spare.

1822.—Thomas Green Fessenden founded the New England Farmer at Boston, Mass., and edited it until his death in 1837. This publication is now discontinued.

1822.—Peter Henderson, market gardener, seed grower and horticultural author, born in this year near Edinburgh, Scotland.

1822.—The Seven Sisters' Rose introduced into England from Japan by Thunberg.

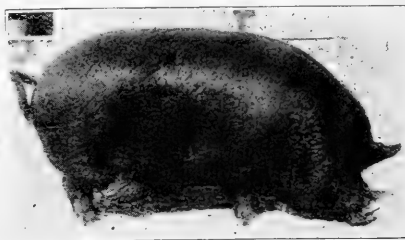
1822.—In his American Orchardist, the editor, James Thatcher, gave valuable directions for the selection of seed in attempting to produce improved fruits and vegetables.

1822, July 5th.—At Sydney, Australia, was held the preliminary meeting organizing the first Australian Agricultural Society. President, Hon. Baron Field; Patron, Sir Thomas Brisbane; Vice-Presidents, Rev. Samuel Marsden, Wm. Cox, Robert Townson and Hannibal Macarthur; Secretaries, Alexander Berry and George Thomas Palmer.

1822.—First Shorthorn Herd Book published in England. It was brought out by Mr. George Coates in his old age and continued by his son.

1822.—Nicholas Longworth, of Cincinnati, Ohio, received cuttings of the Catawba grape from Major Adlum, and thereupon established a vineyard. His grape growing and wine making were eminently successful for many years.

1822.—First Shorthorn Herd Book published in England.



DUROC-JERSEY SOW — HATTIE SECK. as a yearling, weighing 509 pounds. Won sweepstakes at the St. Louis Fair. Exhibited by N. B. Cutler, of Carthage, Ill.

1822.—Henry Keisey, of Florida, Montgomery, county, New York, imported a pair of red hogs from England. These hogs were afterwards called Durocs, named for a famous horse he owned.

1823.—At one of the quarterly meetings the **Australian Agricultural Society** paid for and destroyed 387 native dog tails, it being a fair presumption that previously the dogs had been destroyed.

1823, January 1st.—Students first received at Gardiner Lyceum, an institution for instruction of **mechanics and farmers**, Rev. Benjamin Hale, first President. The institution was named in honor of Robert Halliwell Gardiner, who obtained the grant of \$1,000 per year to put the first agricultural college on its feet. They had twenty regular students the first year, besides others who attended the short course in winter.

1823.—At a dinner given by the Australian Agricultural Society the gardens of Dr. Townson and Mr. Piper furnished **eighteen kinds of fresh fruit and four kinds of dried fruit**. The banana, the Orlean plum, the real peach, the cat-head apple and a fine kind of muskmelon were specially mentioned.

1823, May 23d.—Historic sectional contest in **horse racing** between the North and the South. American Eclipse represented the North, and Henry, or, as he was originally named Sir Henry, represented the South. Eclipse won two four-mile heats out of three. Time, 7:37½, 7:49 and 8:24. Average heats, 7:57, or 1 minute 57 seconds to the mile.

1823.—Grant Thorburn's (New York) **seed catalogue** at this time was the only one issued in pamphlet form.



HULOT—PERCHERON STALLION. Champion any age or breed at the Fort Worth Breeders' and Feeders' Show, 1912. Exhibited by J. Crouch & Son, Lafayette, Ind.

1823.—Jean-Le-Blanc, a remarkable **Percheron stallion**, foaled in this year. To this sire a great portion of the finest, large Percheron horses trace their origin. He is considered as the great improving agent of his race. He died at thirty-two years of age, the property of M. Miard, of Villiers, Department of Orne. He was a Percheron of the purest blood, strengthened by infusion of the Arab.

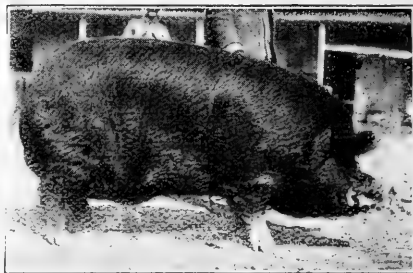
1823.—Henry Eckford, famous as **improver of plants**, born in Scotland. "Our gardens owe much of their sweetness and beauty to him, and his work has brought a blessing to many an humble flower lover who never heard his name."

1823.—Abdallah, son of Mambrino, and sire of Hambletonian, a horse of very remarkable and positive character, was foaled in this year on Long Island, New York, and bred by John Treadwell. Abdallah lived until 1854.

1823.—James McDowell, improver of **Dickinson Merinos**, commenced herding sheep in Stark county, Ohio, ending as breeder in 1887.

1823.—Hon. Chas. Rich, of Shoreham, Vt., established a flock of **Spanish Merino sheep**.

1823.—**Berkshire swine** introduced into the United States by John Brentnall, an English farmer living in New Jersey.



BERKSHIRE BOAR — CARLOS VICTOR. 2d. A three-year-old, weighing 700 pounds. Took first prize at several State Fairs and at St. Louis. Exhibited by Etzler & Moses, of Convoys, Ohio.

1824.—By act of Parliament, the **English acre** was required to contain 4,840 square yards.

1824.—Thomas Berwick, an English animal artist, said of the **zebra**: "Such is the beauty of this creature that it seems by nature fitted to satisfy the pride and formed for the service of man, and it is most probable that time and assiduity alone are wanting to bring it under subjection."

1824.—The **Merino buck** Bolivar, owned by Wm. K. Dickinson, of Steubenville, Ohio, won first premium in wool sheep classes at Washington, D. C.

1824.—The Acadians in Louisiana introduced a new method by which **tobacco** was cured under intense pressure in its own juice.

1825.—Mr. John J. Coiron introduced **new seed plants** of sugar cane from Georgia, but originally from the island of Eustatius.

1825.—First **tobacco warehouse** established in Connecticut at Warehouse Point.

1825.—John Quincy Adams, **President of the United States**, and served four years.

1825.—**Floriculture**, originated in Philadelphia, commenced to be of importance about this time.

1825, March 15th.—The following advertisement appeared in the Indianapolis Journal: "**Seed oats and potatoes**. The subscriber has for sale at his residence on Circle street, Indianapolis, a quantity of seed oats, largely Early Blue, White Marino and red potatoes." The advertisement was signed by Isaac Coe.

1825.—James Moores, of Steubenville, Ohio, sold the **wool clip** from one hundred sheep at one dollar per pound.

1825.—**Ayrshire cattle** mentioned by agricultural writer Alton.

1825.—At a meeting of the **Australian Agricultural Society** Mary Kelly received an award of twenty Spanish dollars for an exhibit of silk, and at the same meeting a threshing machine made by John Blaxland was exhibited.

1825.—In this year a **large ox** was mentioned in the newspapers: "A fat ox intended for the New York market was reared at Shaftesbury, Vt., and was exhibited at Troy, N. Y., March 28. It was seven years old and of the real American breed and said to weigh 2,772 pounds."

1825.—Colonel W. S. Hamilton, son of Alexander Hamilton, made a contract to supply beef to the garrison of Fort Howard at Chicago, Ill., and for this purpose bought and started a **drove of cattle** from Springfield, Ill. This was the first shipment of Illinois cattle to Chicago. Previously the garrison had been supplied from Cleveland and Buffalo. The cattle referred to cost \$10 per head, and a young man named John Hamlin accompanied them as drover.

1825.—In this year Lucien B. Maxwell, an American, who traveled to the Cimarron

river, was married to a daughter of Charles Beaubien, a pioneer Frenchman, inheriting an immense tract of land since known as the "Maxwell Grant." In his later days Mr. Maxwell owned 10,000 horses, 10,000 cattle and 40,000 sheep. He employed 500 men, and was the first American ranchman of prominence in that section of the Southwest.

1825.—The Daily Advertiser in September of this year said: "The **Saxon sheep** imported by G. & T. Searle were sold at Brighton, near Boston. The highest price given for a single one was \$450, and another was sold for \$325, and the average price, including lambs, was \$160 per head. The purchasers were nearly all gentlemen experienced in raising sheep.

1825, August 1st.—The following advertisement appeared in the Indianapolis Journal: "Henderson & Blake will give six cents a pound in specie for all the **fresh-dug Ginseng** that is delivered to them. The Ginseng must not be washed but be free from curls and cut roots."

1825.—In this year a party started from Franklin, Mo., to New Mexico. They were eighty strong and had with them 200 horses and mules. They reached Santa Fe, 931 miles from the place of starting, in due time. In record of this expedition it is said that after reaching New Mexico the first civilized habitation met with was owned by Juan Peno, who, in addition to owning cattle and horses, has flocks amounting to 150,000 sheep.

1825, October.—A fat hog news item appearing this year gives some idea of swine raising at the time. "A hog is feeding in Forks township, Northampton county, Pennsylvania, that weighs more than 800 pounds; is eight feet nine inches long and seven feet in circumference. He is rapidly increasing in bulk and expected to weigh above 1,000 pounds at Christmas."

1826.—In this year this horticultural item appeared and read as follows: "It has been ascertained by experiment that linseed oil being washed over trees previously to their budding out will render them **impervious to frost.**"

1826.—Rev. Patrick Bell, of Scotland, produced a **mowing machine**, having, in addition to previous inventions, a revolving apron or endless web for gathering. This is the oldest machine which came into general use. McCormick's cutting apparatus adopted in 1851 gave it renewed life.

1826.—In this year Hon. Wm. Jarvis, of Weathersfield, Vt., said that he began to cross his imported flock of **Spanish Merinos with Saxony sheep**. At that time his average fleece was three pounds fourteen ounces to four pounds three ounces. His buck fleeces ranged from five and one-quarter to six and one-half pounds.

1826.—According to a letter written by Hon. Wm. Jarvis, a great importer of sheep, **foot rot** was brought into this country with the sheep imported from Saxony in this year. He also said: "Foot rot was totally unknown among Spanish Merinos."

1826.—The Indiana Journal, published at Indianapolis, contained advertisement of John Francis Dufour, Postmaster at Vevay, Indiana. He proposed to publish a weekly agricultural journal under the title of the **Western Farmer**. The announced subscription price was \$3.00 a year.

1826.—A horse named Trouble trotted a mile in 2:43.

1826.—"Leaming," a deep yellow corn, originated with Mr. J. S. Leaming, of Wilmington, Ohio. This is the earliest of eight varieties of corn recognized by the Illinois Seed Corn Breeders' Association.

1826.—First mill established for the extraction of oil from cotton seed at Columbus, S. C.

1826.—First official cotton quotation record. **Middling upland cotton**, New York market, highest price of the year, 14 cents; lowest, 9 cents per pound.

1826.—Maryland Agricultural Society offered a special premium to owner of lamb shearing the greatest quantity of picklock wool; won by W. R. Dickinson, of Steubenville, Ohio.

1826.—Agricultural school founded as private institution at Grignon, near Paris. The oldest agricultural institution in France.

1826.—The first drove of hogs on record as being received at Chicago were driven from the Wabash river during the winter of 1826-7. They were brought in by Gurdan S. Hubbard, who sold them to the soldiers at Fort Howard and the citizens surrounding the fort.

1827.—Mr. Parsons Gorham, of Cincinnati, sold seeds and was one of the early Western merchants carrying a supply of seeds.

1827.—First slaughter house in Chicago built of logs by Archibald Clybourne. The first drove of hogs was received at Chicago this year.

1827, October 3d.—"Rattler," (pedigree unknown), placed the trotting record for two miles at 5:24.

1827.—In this year, in England, a Mr. Clark of Canwick, exhibited two wether **Lincoln sheep** in the Lincoln market. The fleeces had yielded twelve pounds each. When slaughtered, the carcass of the larger one weighed 261 pounds; each of the fore quarters weighed 73 pounds, and the hind quarters 57½ pounds. On the top of the rib the solid fat measured nine inches in thickness.

1827.—The earliest recorded apple tree planting in Kansas was in this year by Reverend Thomas Johnson, near Shawneetown, Johnson county.

1827.—The idea of condensing milk to make it keep better occurred this year to a French chemist named Appert. Seven years later the method of evaporating the milk in rarefied air to prevent it from reaching the boiling point was first used.

1827.—In this year Archibald Clybourne opened a **butcher shop in Chicago**, and during the winter of 1833 established a slaughter house on North Branch, south of Bloomington Road. This is the beginning of Chicago's manufacturing and packing interests.

1827.—Statement by Grant Thorburn: "Besides good seeds good gardeners are necessary in making a garden flourish."

1827.—As marking the development of the Western country it is recorded that in this year a permanent settlement was made by white men on the west bank of the Missouri river. It was first protected by a military cantonment afterwards called **Fort Leavenworth**, in honor of Colonel Henry H. Leavenworth, the commander of the troops.

1827.—The South Carolina Railroad Company organized and operated by horses.

1828.—"A Treatise on Horticulture," the first comprehensive book on the subject in the United States, written by William Prince, of Long Island.

1828.—Nicholas Longworth, of Cincinnati, by introducing native vines or their seedlings, produced from Catawba and Isabella grapes wine of a high marketable value.

1828.—A Mr. Corbett attempted to raise **Indian (American corn)** in England. He published a book, entitled "A Treatise on Corbett's Corn."

1828.—At East Hartford, Conn., Timothy Deming first undertook the manufacture of **horse collars**. He invented the short straw collars and the blocks on which to make them.

1828.—An old market report. From the Indianapolis Journal, July 3d: "Market at this place—Flour, \$2.50 per 100 pounds; corn meal, 50 cents per bushel; bacon, 8 cents per pound and much in demand. A scarcity of the latter article may be attributed to the number of hogs which were driven from this section of the country during the last fall to a foreign market." The foreign market in all probability was Cincinnati.

1828, August 3d.—Birth of Andrew S. Fuller, farmer, mechanic, horticultural writer and improver of flowers and fruits. He died in 1896. His "Small Fruit Culturist" is published in several languages.

1828.—A treatise on the rearing of silk worms by Dr. De Hazzzi, of Munich, was translated from the German by Mr. James Mease, of Washington, D. C., by order of the United States Congress.

1828.—The following item appeared in the newspapers in November of this year: "We are informed that Mr. Israel Cole, of the town of Berkshire, Mass., has made this season 16,000 pounds of cheese from the milk of only twenty-eight cows, being on an average of 571 pounds to each cow. His cheese is of the best quality and fetches with his established customers in New York one or two cents per pound more than that of ordinary dairies. The average price of cheese at this time was 12½ cents per pound.

1828.—A Mr. Riley and Mr. Richard Jones were awarded medals by the Australian (New South Wales) Agricultural Society for introducing Saxony sheep into Australia.

1829.—An act of Parliament passed in England regulating the package, weight and sale of butter.

1828.—In this year Peter Hayden, of Cummington, Mass., commenced the manufacture of harness and saddlery at Auburn, N. Y., this being the foundation of the largest American saddlery house. So great was his success that for the time being the importation of foreign saddlery ceased almost entirely through his efforts.

1829.—Topcollant, a son of Corlander, dam by Bishop's Hambletonian, established the three-mile trotting record of 8:11.

1829.—Andrew Jackson, President of the United States, and served eight years.

1829.—The soy bean first grown in America in the botanic garden at Cambridge, Mass.

1829, September 7th.—The first pacer mentioned in the history of the light harness turf, Bowery Boy (pedigree unknown), established the two-mile pacing record at 5:04½.

1829.—First locomotive engine tried on American continent to run on rails imported by the Delaware and Hudson Canal Company. It weighed seven tons and was considered too heavy. The engine was known as the Stourbridge Lion.

1829, September.—The first number of the American Turf Register and Sporting Magazine was issued in New York, with John S. Skinner as editor. Ten years later this paper was absorbed by The Spirit of the Times.

1829.—In this year the first poultry incubator constructed was exhibited in London, England. It was a hot-water incubator, and was not at all satisfactory.

1829.—The tomato first sold on the market in Philadelphia.

1829.—The Jonathan apple originated in New York about this year.

1829.—Straw and grass first utilized in the United States for the manufacture of paper by G. A. Schryock, of Philadelphia.

1829, November 26th.—Great inundation of the Nile, in Egypt, begins. About 30,000 people perish by the overflow.

1830.—First practical locomotive engine for every-day work built at West Point Foundry, New York, for the South Carolina Railroad.

1830.—In the early part of this year the B. & O. Railway was finished from Baltimore to Ellicott Mills, a distance of thirteen miles. It was operated by horses.

1830.—Prince, in his "Treatise on the Vine," published this year, described eighty-one native grapes of America. Two or three thousand varieties have been disseminated since, which are the offspring of our native species.

1830.—Oxford Down sheep originated by a cross of Cotswolds, Hampshires and probably Southdowns.

1830.—Jersey cattle first imported into the United States from the Channel Islands.

1830.—The vacuum pan erected in sugar house by Mr. Thomas Morgan in Louisiana, the pioneer of these appliances.

1830.—Major Knox, of Danville, Ky., great breeder and prize winner, commenced breeding jacks and jennets.

1830.—Wm. Ensign, of Wilbur's Basin, Saratoga county, N. Y., commenced breeding red hogs.

1830.—Light one-horse wagons first appeared in Connecticut.

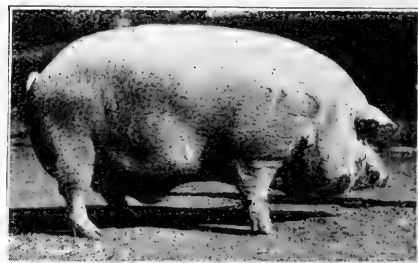
1830.—Wm. McCombie, of Tillfour, Scotland, founded a herd of Aberdeen-Angus cattle.

1830, June.—In the American Turf Register and Sporting Magazine a contributor suggests that "trotting matches at regular periods" would be as useful as the running races by thoroughbreds.

1830.—Jonathan Curran, of Murfreesboro, Tenn., started breeding jacks and jennets.

1830.—Johnson grass introduced into this country from Turkey.

1830.—Japan clover first coming into notice in this country. It was an accidental introduction from Japan.



CHESTER WHITE BOAR—EXPORT, as a two-year-old, weighing 700 pounds; was sweepstakes winner at the St. Louis Fair. Exhibited by J. W. Dorsey & Sons, of Perry, Ill. The St. Louis Fair referred to is the Great St. Louis Fair, first opened in 1856.

1830.—First appearance of the Chester White hog in Ohio. Keeland and Isaac Todd brought a pair with them from East Haven, Conn., to the vicinity of Wakeman. Three years later Joseph Haskins also brought a pair from Massachusetts.

1830.—In this year in his "Treatise on the Vine," Mr. W. H. Prince enumerates eighty-eight varieties of American grapes.

1831, January 1st.—The Genesee Farmer founded by Mr. Luther Tucker at Rochester, N. Y., and was the forerunner of The Country Gentleman, the oldest agricultural periodical in the world, having been published continuously and without interruption.

1831.—In this year superior steel hoes made at Pittsburgh were sold at \$4.50 per dozen. Iron and steel were low in price at that time.

1831.—The steel spring (prong) pitchfork introduced and patented in the United States in this year by Charles Goodyear, of Philadelphia.

1831.—Benjamin Warfield, of Lexington, Ky., purchased the first pure-bred Shorthorn cow owned by him. Foundation of Grasmere Shorthorns.

1831.—Prince, the naturalist, gave the first native raspberry to come into cultivation its proper name—Common Red. It had been called English Red.

1831.—Redfield, investigator of weather conditions, published his first essay, describing action of storms and hurricanes.

1831.—Silk Culture Manual published by J. H. Cobb distributed by Commonwealth of Boston and the United States Senate.

1831.—S. C. Parkhurst opened a seed store in Cincinnati, Ohio, and did a large trade in grass and clover seeds.

1831.—In this year The American Farmer described a machine invented by Thomas D. Burrall, of Geneva, N. Y., for the purpose of cleaning clover seed.

1831, December 10.—The Spirit of the Times, great sporting paper, started as a weekly, with Wm. T. Forter as editor, in New York City. The last issue of this paper was in December, 1902, when it was consolidated with the Chicago Horseman.

1831.—Youatt, eminent writer on live stock subjects, mentions Normandy, in France, as noted for its horses.

1832.—Alexander Riley, of New South Wales, imported thirteen pure-bred **Angora goats** from France, receiving them at the port of Sydney. On account of death in the family, these goats were afterwards dispersed. They were the first New South Wales Angoras.

1832.—Messrs. Heathcote & Parker, of England, employed **traction steam engines** in clearing a large tract of marshy ground lying between Manchester and Liverpool, which had been considered unreclaimable by any other means at hand.

1832.—Late in this year Charles Cist, of Cincinnati, instituted the first definite statement of **pork packing in the West**.

1833.—Ohio Importing Company organized by Allen Trimble, Duncan McArthur, Felix Renick and others to **import cattle**, principally Shorthorns.

1832.—The first lot of **cattle** was **packed and barreled** in Chicago by Geo. W. Dole for Oliver Newberry, of Detroit, Mich., the number being 150 head. They were driven from Wabash and cost \$2.75 per 100 pounds for the net beef, the hides, tallow, etc., being thrown in by the seller. The cattle were slaughtered at what is now the corner of Madison street and Michigan avenue, then the high prairie. In December of the same year Mr. Dole also bought and slaughtered the first hogs ever packed in the West, there being 338 head, average unknown, but cost three cents per pound on foot. The 150 head of cattle referred to in this item were purchased of Mr. Charles Reed of Hickory Creek, Ill. It must be remembered that it was salt-beef packing, largely for the supply of sea-going vessels. This salt-beef packing industry was displaced to a large extent later by dressed-beef transported in refrigerator cars, although salt-beef packing is not a lost art, by any means.

1832.—A pair of **Jersey red pigs** imported from Spain to Salem, N. J.

1832.—Mr. Thomas Hoge devised a system representing important principles of **hot-water heating for greenhouses**.

1832.—Kendrick, in the "New American Orchardist," suggested the **blackberry** as being worthy of cultivation.

1832.—Mr. Jonas Webb, of Suffolk, England, recorded as successor of John Ellman in improvement of **Southdown sheep**.

1832.—Mr. Hawes, of England, imported **Berkshire swine** at Albany, N. Y.

1832.—In this year Mr. David Bradley, famous as manufacturer of agricultural implements, commenced work in **plow making** at Syracuse, N. Y. Three years later he returned to Chicago to help erect the first foundry there, and was the first man to bring pig iron into that city. The establishment soon began the manufacture of plows. He worked at the bench wooding "Garden City Clipper" plows, whose name and fame have become world-wide. Leaving the employment of others, he soon had a plow shop of his own, and for fifty years saw it growing to larger and larger proportions, right in the heart of Chicago, until it became one of the largest manufacturing establishments of agricultural implements and compelled him to get larger ground space, which he finally did in the town which saw fit to honor his coming by taking upon itself his name. Mr. Bradley died at the age of 87 years, the **oldest plow maker in the United States**.

1833.—**Product of wheat on Island of Jersey**. Five-years' average ending this year was forty bushels per acre.

1833.—In this year a royal decree in France established the **Government Stud Book**, which had considerable influence in the improvement of French horses.

1833.—The **Maine Farmer** established at Augusta, Me.

1833.—Isaac Hoskins moved from New Bedford, Mass., to Wakeman, Ohio, carrying with him white hogs that helped to establish the **Todd Improved Chester Whites**.

1833. November 19th.—A patent for a method of cultivating or **working land by steam power** was first issued in the United States to E. C. Bellinger, of South Carolina, but the invention never went into general use.

1833.—In this year, in the New American Orchardist. William Kenrick mentions twenty-three **varieties of figs**.

1833.—Daniel Pratt, a native of New Hampshire, commenced the **manufacture of cotton gins** in Autauga county, Alabama.

1833.—Antoine LeClaire established an orchard at Davenport, in Scott county, Iowa. This orchard contained about 400 trees, which were brought by boat from Cincinnati, Ohio, and was the second orchard started in that state.

1833.—In this year four tons of silk cocoons were produced in Windham county, Connecticut. The interest in **silk culture** had been advanced by boom methods until it partook of the nature of a craze instead of a legitimate industry.

1833.—Charles Mason Hovey began a series of experiments and finally produced Hovey's **Seedling strawberry**, which became the leading berry for thirty years and actually caused strawberry culture to become a popular and profitable industry. It was the first strawberry suited to climate and conditions of America. It is now extinct.

1833.—William Smith was born in this year. He invented the **stump puller** in 1861. He died in 1910 at LaCrescent, Minn.

1833.—Boston, the phenomenon, a **thoroughbred horse**, foaled in this year. He was bred by Judge John Wickham, of "Luckahoe," Virginia. He was "a horse with a backbone like a fence rail and a stile like a Durham bull." He ran a mile in the first heat of a longer race in 1:46, which was three-fourths of a second faster than the record at that time. At the height of his career his owner advertised to match Boston against any two horses in the world, to run four-mile heats for no less a sum than \$45,000, taking one horse in one heat and the other in the next. The challenge stood in the advertising columns of the Spirit of the Times without takers.

1833.—**Rice** successfully threshed out in the Southern States by animal and steam power.

1833.—Sylvester Marsh arrived from the East in Chicago, and after working in the new town three years projected a **packing house** on Kinzie street, near Rush street. They packed 6,000 hogs in 1836. He used to go 150 miles to the Wabash river driving cattle, hogs and sheep and whatever he could pick up on the way. The canal became his best source of supply before railroads were running into Chicago.

1833. December.—Obed Hussey, of Cincinnati, Ohio, received a patent for a **reaping machine** which obtained favorable recognition in several states. Five years later a manufactory was established at Baltimore.

1834. October.—A **steam plow** was tested by the inventor, Major A. Tyrrell, in Genesee county, New York.

1834.—The **Royal Jersey Agricultural Society** held its first meeting on January 18th. This society played a very important part in the early development of Jersey cattle and continued to do so.

1834.—First breeding of **Berkshire swine** on farm of Richard Gentry, in Pettis county, Missouri. He was united and stepfather of N. H. Gentry, the famous improver of Berkshires.

1834.—Old Grannie, calved on the farm of Hugh Watson, of Keillor, Scotland. First cow recorded in **Aberdeen-Angus Herd Book**. This famous cow lived to be thirty-five years of age.

1834.—Edwin Forerest, black gelding of unknown breeding, **reduced the trotting record** to 2:31½.

1834.—A **cotton-seed oil mill** erected at Natchez, Miss.

1834.—A "Howard" **vacuum pan** established in the sugar house of Mr. Valcour Alme, planter, of St. James Parish, Louisiana.

1834.—**Shorthorn cow Princess** sold by H. Clay, Jr., of Kentucky, for \$2,000.

1834. March.—The **Cultivator**, an early agricultural paper, was founded by Jesse Buel under the auspices of the New York State Agricultural Society. Edited by Judge Buel, who afterwards became proprietor.

1834.—Wm. Fullerton, of Ardovie, Scotland, started a breeding herd of **Aberdeen-Angus cattle**.

1834.—Tyler Stickney flock of **Spanish Merino sheep** established at Shoreham, Vt.

1834.—Importation of heifers **Rose of Sharon** and Young Mary, famous for **Short-horn** excellence.

1834.—A vessel from **Leghorn** arrived in America, and a part of the cargo was a small **shipment of fowls**, which were at once named "**Leghorns**." They became popular on account of their good laying and non-sitting qualities.

1834.—First patent for his **reaping machine** issued to **Cyrus H. McCormick**, of Rock-bridge county, Virginia. It was worked in 1831, improved many times, and "a great boon to this country and foreign lands."



CYRUS HALL MCCORMICK, inventor of the reaper. Born February, 1809; died October, 1865. Inventor of the first practical reaping machine.

1835.—The **Bloodgood pear** brought into notice by **James Bloodgood**, of Flushing, Long Island.

1835.—**A. C. Moore** and **D. M. Magie**, in Ohio, two of the originators, breeders and principal improvers of **Poland-China swine**.

1835.—**Norton's Virginia grape**—an off-spring of the wild summer grape of the Southern and Middle States—found on Cedar Island, in the **James river**, near **Richmond, Virginia**.

1835.—**Fifty miles** were trotted in three hours and fifty-seven seconds by a horse of unknown pedigree called **Black Joke**.

1835.—**Mr. Thomas Ferguson**, of Kinoctry, Scotland, founded a herd of **Aberdeen-Angus cattle**.

1835.—In **Warren** and **Butler counties, Ohio**, a local breed of swine known at this time as the **Warren County Hog** and the "**Big Spotted**," were afterwards included as **Poland-Chinas**.

1835.—**James Smith**, of **Deanston, England**, promulgated his system of **thorough draining** and **deep plowing**.

1835.—**Captain James Knight**, of **Nashville, Tenn.**, bought a **fine jack** in **Virginia** named **John Bull**, third descendant of **Royal Gift**.

1835.—**Lord Western** of **England** introduced **Neapolitan swine** from **Italy** to improve the **Essex pigs**.

1835.—**Baling presses** known to be made in the state of **Maine** about this time.

1835.—In **England**, **Sir Robert Peel** presented a farmers' club with two **iron plows**, went back afterwards to see the work done with them, and found the plows with wooden moldboards again at work. "Sir," said a member, "we tried the iron and be all of one mind that they made the weeds grow."

1835.—A new variety of **potato** called **Perkins' Seedling**, was originated at this time by planting a seed ball a year or two before.

1835.—In **September** of this year the first **Agricultural Fair** in **Missouri** was held at **Columbia, Boone county**.

1835.—The **Magazine of Horticulture** established at **Boston, Mass.**, by **C. M. Hovey**.

1835.—By this time extensive **greenhouses** had been erected in the vicinity of **New York, Boston** and **Philadelphia**. One establishment at **Long Island** had houses aggregating **400 feet** in length.

1835.—It was announced in **December** of this year that a **Mr. Bailey**, of **Hartford, Conn.**, had invented a cast iron **grist mill**, which had been tested by grinding wheat of rye and corn as well as most kinds of provender, corn in the ear, oil cake, etc., and its work was pronounced by experienced millers to be equal to that produced by the common millstones. One horse could grind ten bushels of rye or wheat per hour sufficiently fine for flour. The cost of a mill with the machinery for a horse to work it was mentioned at \$250 to \$300.

1836.—**Daniel Webster**, the statesman, invented a **plow** for work twelve and fourteen inches deep, cutting a furrow twenty-four inches wide. It is still in existence—twelve feet long, the beam twenty-eight inches from the ground, and the landside four feet long. It was designed for a field which was full of roots.

1836.—**James Jackson**, of **Alabama**, sent to **England** for the best thoroughbred there, and the **horse imported** was **Glencoe**. He was sire of **Pocahontas**, the great thoroughbred matron. **Glencoe** died at the age of 26 years; owned by **A. Keene Richards**, of **Kentucky**.

1836.—**Tomatoes** began to be cultivated in this country as food; had been raised principally for ornament under the name of "love apples."

1836.—The **Western Province Agricultural Society** of **South Africa** offered a silver cup, value fifty pounds sterling, to be awarded for the best 100 pounds of **Merino wool**, and had to be won three times in succession before becoming the property of an individual owner. Won in 1846 by **Reltz, Van Breda & Joubert**, original importers of **Merinos** into that country.

1836.—The **Baltimore Belle** and the **Queen of the Prairies Roses** named this year by a **Baltimore florist**. They came from the **Michigan Rose**.

1836.—**Erastus Corning**, of **Albany, N. Y.**, imported **Shorthorn cattle**.

1836.—**Joel Nourse & Co.**, of **Worcester, Mass.**, commenced the manufacture of **agricultural implements** and made important improvements on the cast-iron plow.

1836.—On **July 4th** of this year the **United States Patent Office** was made a separate bureau, and **Hon. Henry L. Ellis**, worth of **Connecticut**, was **Commissioner**. He had been a practical farmer, and he considered it within the proper scope of his office to help farmers by distributing seeds and plants.

1836.—**Captain James Knight**, **General A. Wilson** and **General I. M. Knight**, of **Marshall county, Texas**, bought the **Kentucky Jack** **Maringo Mammoth**. Sold at nine years old to **L. W. Knight** for \$2,160. This jack won many premiums.

1836.—**Templemoyle Agricultural Seminary** established in county of **Londonderry, Ireland**.

1836.—**Devon cattle** imported by **Mr. Vernon**, of **New York state**.

1836, **October 29th**.—At **Felix Renick's farm, Ross county, Ohio**, imported **Short-horns** sold at an average of \$803.25 for forty-nine head. Seven bulls and seven heifers each sold for upwards of \$1,000 each.

1836.—Bay, a pacer of unknown pedigree, paced two miles under saddle in 5:04½.

1836.—Charles Mason Hovey, an American horticulturist, called attention to the change in color produced in the flower calceolarius by the introduction of a different colored species. An evidence of distinct results in plant breeding.

1836.—Mr. H. Clay, Jr., of Fayette county, Kentucky, began importing **Shorthorns**.

1836.—**Kew Botanical Gardens** in England founded by Sir W. Hooker.

1836, November.—The French War Department, after three-years' experiment, could not determine whether or not **glanders** in horses was a contagious disease.

1837.—Martin Van Buren, **President of the United States**, and served four years.

1837.—Ross' **Phoenix strawberry** raised by Alexander Ross, of Hudson, N. Y., from Keene's Seedling.

1837, October 24th.—Final sale of Ohio Importing Company **Shorthorns**. Fifteen head averaged \$1,071.65.

1837.—Lewis F. Allen, in his "American Cattle," mentions appearance of a fine **Gallopway cow** in Philadelphia.

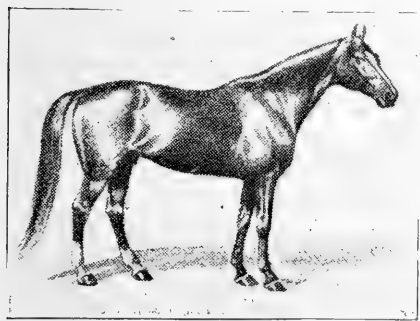
1837.—Legislation in North Carolina to prevent the driving of cattle from South Carolina or Georgia through that state on account of the **cattle disease** caused by them.

1837.—Amos Cruickshank, of Slittytton, near Aberdeen, Scotland, first began **breeding Shorthorns**, foundation of what are now called Scotch or "Cruickshanks."

1837.—Henry Clay, 2:35, famous trotting sire, foaled in this year; bred by Geo. M. Patchen, of New Jersey. This horse was afterwards sold for \$1,050 (which was a dollar a pound). He made his record of 2:35 in a five-heat race which he won, having been driven ninety-eight miles the day before.

1837.—Three **steel plows** made by hand this year by John Deere, said to be the first steel plows made.

1837.—Henderson Lewelling started a **nursery** near Salem, Henry county, Iowa, which was continued by his brother John until 1850, when he closed out the stock and went to Oregon.



SEELEY'S AMERICAN STAR.

1837.—Seeley's American Star, recorded as American Star, 14, foaled in this year, bred by Henry H. Berry, of Pompton Plains, N. J. He is noted as sire of **speed-producing brood mares**.

1838.—First **Chicago grain elevator** established this year and made the first shipment of wheat.

1838.—**Royal Agricultural Society** of England established with 466 members.

1838.—First direct importation of **Shorthorn cattle** from England to Indiana by Mr. Chris. Whitehead, of Franklin county.

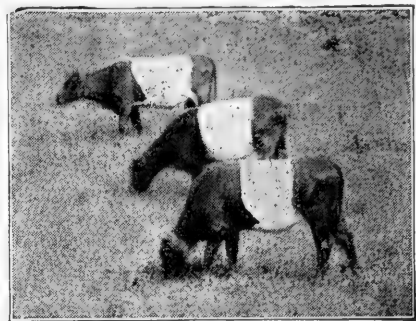
1838.—The method of imbedding glass in putty in **construction of greenhouses** known to be in use in England at this time.

1838.—**Shorthorn cattle** first introduced into France.

1838.—Glasnevin **Training Farm** established in Ireland by Commissioners of National Education.

1838.—**Berkshire hogs** introduced into Canada.

1838.—**Dutch Belted cattle** first imported into the United States by D. H. Haight, of Goshen, N. Y.



DUTCH BELTED CATTLE.—Bred and owned by G. G. Gibbs, of Marksboro, N. J.

1839.—In this year the horse Dutchman obtained a mile **trotting record** in 2:32.

1839.—In this year the first cargo of **flax seed imported** in America arrived from Russia. The United States had already exported as high as 292,460 bushels of flax seed in one year.

1839.—In the summer of this year R. H. Schomburgk, a German explorer, returned from British Guiana to London with collections of the magnificent water lilies known as the **Victoria Regia** and the **Elizabetha Regia**, and several new species of orchids—one of which has been named for him the Schomburgkia orchida.

1839.—Dutchman, by Tippee Saib, Jr., and whose dam was by a son of Messenger, **trotted three miles** against time under saddle in 7:32½.

1839.—Denmark, a **thoroughbred horse**, foaled in this year, is first foundation sire of the Kentucky saddle horse. He was by Imp. Hedgeford, out of Betsy Harrison.

1839.—Edward Harris, of Moorestown, N. Y., earliest importer of high-class **draft horses**, imported two draft mares and the stallion "Diligence." They were French horses.

1839.—Messrs. Bagg & Wait, of Orange, county, New York, made large importations of **Berkshire swine** from England.

1839, March 3d.—During the closing hours of the Twenty-fifth Congress, Hon. Henry L. Ellsworth, then Commissioner of Patents, secured an appropriation of \$1,000 for "the collection of agricultural statistics, investigating and promoting rural economy and the procurement of cuttings and seeds for gratuitous distribution amongst farmers." This is the origin of the **United States Department of Agriculture**.

1839.—N. Leonard, of Cooper county, Missouri, founded the Ravenswood **herd of Shorthorns**, first pedigreed herd west of the Mississippi.

1839.—Oxford Royal, the first **English National Show**. Thomas Bates' Shorthorns won great honors.

1839.—Fayette County (Kentucky) Importing Company sold twenty-six **Shorthorns** at an average of \$627.35 per head.

1839.—The **Boston Cultivator** established at Boston, Mass.

1839, June.—**Hereford cattle** imported into this country by W. H. Sotham.

1839, October 3d.—The first mile below 2:30 was by Drover, who in this year paced at 2:28 at Beacon Course, N. J.

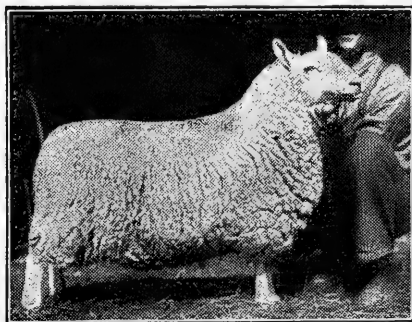
1840.—Dr. Perrine at Indian Key, Fla., introduced the **Mango plant** from the West Indies.

1810.—About this year **Plymouth Rock fowls** were originated near Woodstock, Vt. Messrs. Giles, Clark, Thayer, Spaulding and Rev. H. S. Ramsdell being the originators. The Plymouth Rock was the result of a cross of American Dominique males with single comb black Java females.

1840.—The group of **carnations** now most cultivated in America, known as perpetual flowering, tree or monthly carnations, originated in France about this year, as the result of crossing and selection.

1840.—In this year the **subsoil plow**, adapted to teams up to six horses, was introduced from Scotland into the United States.

1840.—First **Cheviot sheep** imported into the United States of America.



CHAMPION CHEVIOT EWE at the Indiana and Illinois State Fairs of 1906. Exhibited by J. Kioilin, of Brooklyn, Wis.

1819, June 10th.—**Furs**—The St. Louis Bulletin of the 5th said: "Two Mackinaw boats arrived here yesterday from Iowa, loaded with buffalo robes."

1810.—The **Angora goat** first imported into Cape Colony, South Africa, by Colonel Henderson, an officer in the British army.

1840, January.—Mr. Luther Tucker, of Rochester, N. Y., purchased The Cultivator upon the death of the owner, Judge Buel, consolidating it with his paper, The Genesee Farmer, under the name of The Cultivator.

1840.—Twenty ewes and two rams selected from the **Rambouillet Merinos** of France were imported into the United States by D. C. Collins, of Hartford, Conn.

1810.—About this year Mr. Ephraim Bull, of Concord, Mass., discovered a wild grapevine, from which he grew, developed, cultivated and improved the grape now called the "Concord." It is considered the greatest advance in grape growing in this country.

1840.—Justus von Liebig published a famous work, entitled "**Organic Chemistry, in Its Relation to Agriculture.**" He established in the popular mind the theory of the plants' almost entire dependence on mineral food. He founded **artificial fertilization**; demonstrated the value of potash as plant food; and many other valuable discoveries are attributed to him.

1840.—**Imported Jack Knight Errand** brought to Maury county, Tennessee; owned by Mr. Thomas; afterwards sold to General J. Pillow.

1810.—P. T. Barnum and W. R. Coleman imported **Dutch Belted cattle** into the United States.

1840.—Mr. Fisher Hobbs, tenant of Lord Western, in England, established accepted type of **Essex hogs**.

1840.—Colonel Wm. Johnson, plantation owner near Marion Junction, Alabama, first sowed the grass which now bears his name.

1840.—A. C. Clark, of Jefferson county, New York, originated breed of swine called **Cheshires**. Sires were large white Yorkshires and bred on the best sows of his section.

1810.—**Mowing machine** improved by McCormick.

1840.—**Cheese** exportations from the United States began to be of importance, mainly from New York, Vermont and Massachusetts.

1841.—First **sheep** introduced into New Zealand from New South Wales, Australia.

1841.—In this year a few bushels of **clover seed** were sent from Cleveland, Ohio, to Canada. The first record of this character.

1841.—William Henry Harrison inaugurated **President of the United States**, March 4th, and died April 4th of the same year.

1811.—John Tyler elected Vice-President, succeeds to the **Presidency of the United States**, April 4th, and serves nearly four years.

1841.—**The Murrain**, or "vesicular epizootic," appeared in England, supposedly introduced by foreign cattle; affected all live stock except horses.

1841.—First commercial record of disposition of **American cotton crop**, season of 1841-42. Crop, 1,684,000 bales, disposed of as follows: To Great Britain, 936,000 bales; to Europe and Mexico, 480,000 bales; home consumption, 268,000 bales.

1841.—**Guano fertilizer** introduced into Great Britain.

1811.—Grade **Hereford ox** exhibited by Mr. Rust at the first New York State Fair, weighing 3,700 pounds.

1842.—First important **importation of wool** into England from Australia, about thirteen million pounds during the year.

1842.—Professor Low said: "**The Dorsets** are the most productive of milk of any of our races of sheep."

1842.—In this year the Erie Railroad first became engaged in the **transportation of milk** and established a freight rate of one-half cent per quart.

1842.—Gray Clyde, 78, **Clydesdale stallion**, imported by Archibald Ward, of Markham, Ontario, Canada.

1842, April 11th.—French experiments finally determined **glanders in horses** to be a contagious disease.

1842.—Early in this year Philo Gregory, of Chester, N. Y., was induced to try the experiment of **shipping milk by rail** to New York City. The terminus of the Erie Railway was then at Goshen.

1842.—Professor Low mentions improved **Ayrshire cattle** as owing superior character to mixture of races from the continent of Europe and the dairy breed of Alderney.

1842.—It was not until after this date that Robert Fortune, naturalist, went to China and sent back many **specimens of flowers**, that the White Chinese Wistaria and Fortune's Yellow Rose became known here.

1842.—**Agricultural Chemistry Association** (first of its kind) organized by Mid-Lothian, Scotland, tenant farmers, at suggestion of Mr. John Finnie, of Swanstone.

1842.—Professor Low classes all the **Channel Islands cattle** under the name of one of the islands, "Alderney."

1842.—**Highest price of upland middling cotton** for the year on the New York market below 10 cents per pound for the first time in history. Highest price of the year, 9 cents; lowest, 7 cents.

1842.—Professor Low, in his book entitled "Domestic Animals of Great Britain," attributes superior condition of **Norman horses** to abundance of grass and food in that province.

1842.—Duke of Northumberland, famous **Bates Shorthorn bull**, at three years and eight months weighed 2,520 pounds.

1842.—**American Agriculturist**, great agricultural paper, founded by A. B. Allen, assisted by Richard L. Allen.

1842.—Meeting of Booth and Bates **Shorthorn cows** at York, England. The ten-year-old Bates Duchess, 34th, took the premium over the Booth cow Necklace.

1842.—**Tobacco warehouse** established at Clarksville, Tenn.

1843.—The **Southern Cultivator** established at Augusta, Ga., by J. W. & W. S. Jones.

1843.—Martin Doyle, writing in this year, asserts that the **Cleveland Bay** horse is a descendant of the old war horse of Great Britain.

1843.—Philo Buckingham bought of Stephen Atwood, of Connecticut, the best **Spanish Merino** ram that Mr. Atwood would spare and two ewes, and took them to Muskingum county, Ohio.

1843.—In this year, according to the United States Department of Agriculture Year Book of 1904, Reuben Ragan, of Putnam county, Indiana, purchased a part of the stock of Josiah Lindley, who had conducted a nursery at Monrovia, Ind. Among it was a long-bodied seedling pear tree in which was a dormant bud of the **Aremberg pear**. This was a rare and high-priced variety at the time, and was given special attention. After being attacked by the pear blight and killed down to the seedling stock, it finally produced a delicious late fall pear of medium size. It was afterwards called the Philopena by the originator.

1843.—In this year George Funk, a well-known stockman of McLean county, Illinois, drove his **first cattle to Chicago**, then being sixteen years of age. He drove from Funk's Grove, McLean county, to Chicago in twelve days. In an address before the McLean County Historical Society of Illinois, sixty years later, speaking of the cattle sold and delivered in early days, he said: "We sold by the dressed weight, the packer getting the hide and tallow."

1843.—According to the book entitled "Industrial Chicago," the packing house of Dyer, Chapin & Wadsworth was established on South Branch, near North street. During that winter Archibald Clybourne killed **3,000 cattle**, which were shipped to New York early in the spring. Others followed Clybourne's example, for beef could be bought for 1½ to 2 cents per pound, according to the grade of the cattle. The packers cleaned out the Western country of its live stock and made hay while they could, regardless of to-morrow's demands. This is about the first item which mentions the prices paid for cattle at Chicago. The beef packing relates to salt beef.

1843.—In this year, at Chicago, corn sold for 13 cents per bushel, and wheat at 35 cents. **Lowest prices on record.**

1843.—The new **Diana grape**, a seedling of the Catawba, first exhibited before the Massachusetts Horticultural Society of Boston by Mrs. Diana Crehore, of Milton, Mass. It was named for her.

1813.—**First Agricultural Experiment Station** established on his own estate, about fifty miles north of London, England, by Mr. John Lawes.

1843.—A **pear tree** planted by Mr. Oakle-tree in 1805 in Illinois, about ten miles north of Vincennes, produced 184 bushels of pears. The girth of the tree one foot from the ground was twelve feet, and nine feet from the ground it was 6½ feet.

1843.—**Pleuro-pneumonia in cattle** first introduced into the United States in the vicinity of New York City.

1844.—"Old Jack," a famous **Aberdeen-Angus bull**, bred and raised by Hugh Watson, of Kelhor, Scotland, sold for a hundred guineas (\$508 in American money)—a big price at that time.

1844.—In January of this year the **Price Current**, famous statistical paper in regard to packing-house interests and products, was started by A. Peabody.

1844.—It was reported to the editor of the American Agriculturist by Mr. Wm. H. Sotham, of Black Rock, N. Y., that in 1844 a **Hereford cow** weighed on the scales at Albany 2,333 pounds alive. Mr. Bennett, of Brighton, Mass., sold this cow to a Boston butcher for \$150. She was exhibited in Boston for a month at a shilling a head. Her beef was of the finest quality, and the owner exhibited the quarters round the city on a warm, sunny day, and spoiled the whole of it.

1844.—Towards the close of this year Wadsworth, Chapin & Dyer, Chicago pork

packers, packed a tierce of **beef for the English market**, the tierce being made by Hugh Maher. During the winter of 1845-46 they killed no less than 2,000 cattle brought in from Central Illinois and Northern Indiana. The price on foot was then about \$2.50 per 100 pounds. This is the beginning of salt-beef packing for export, the business upon which stockmen had to rely to dispose of their surplus before the better methods of canning and refrigerating of beef were inaugurated.

1844.—Boussingault, an eminent French chemist, published a work, entitled "Rural Economy," one of the first great books upon agricultural chemistry.

1844.—Tenants on New York "patroon" estates refused longer to comply with old feudal customs of paying a few bushels of wheat, or a day or two service per year, in order to hold land under them. This led to the allodial system, which enabled them to **pay cash rents** or obtain clear titles without acknowledgment of subservience to estate owners.

1844.—**Royal Agricultural Society of Ireland** organized.

1844.—At Southampton, in this year, the Agricultural Society of England offered prizes for **Channel Island and Crumpled Horn cattle**.

1844.—William W. Plant began the sale of **farm tools and seeds** in St. Louis, Mo.

1844.—The Louisville (Ky.) Journal mentions a large **pork-packing establishment** established in this year on Pearl street, of that city.

1844.—**First cotton mill** erected in Mississippi at Cave Hill, Washington county.

1844.—**First cotton mill** in Arkansas erected at Cave Hill, Washington county.

1844.—Dr. Brinckle, of Philadelphia, grower of raspberries, produced an important variety called **Brinckle's Orange**, from an English sort known as Dyark's Seedling.

1844.—Witnesses examined by a committee of the English House of Commons agreed that in many parts of that country at that time **lands were rented for separate use of individual possessors** from seed time to harvest, after which they were open and common to all for pasturage. They were designated "lammas lands," or "open, commonable, intermixed fields." Thus it appears that England had free range as late as 1814.

1845.—**Newtown Pippins** from the orchard of Robert L. Pell, of Ulster county, New York, sold in London, England, at \$21 per barrel.

1845.—James K. Polk, **President of the United States**, and served four years.

1845.—In this year a Cincinnati journalist published the following: "**Our pork business is the largest in the world**, not even excepting Cork or Belfast, in Ireland, where the country puts up and exports immense amounts in that line; and the stranger who visits Cincinnati during the season of cutting and packing hogs should on no account neglect to visit one or more pork-packing establishments."

1845.—Houghton's Seedling, an **improved gooseberry**, produced about this time from the wild gooseberry near Lynn, Mass.

1845.—Sovereign, 181, **Clydesdale stallion**, imported by R. Johnson, of Scarborough, Ontario, Canada.

1845.—An **agricultural school** at Cream Hill, Conn. established in May of this year by Dr. S. W. Gold and his son, T. S. Gold, continued in successful operation twenty-four years.

1845.—Dr. James B. Davis, of Columbia, S. C., went to Turkey to experiment for the **Sultan in cotton raising**.

1845.—**Hereford cattle** introduced into the island of Jamaica, West Indies, by Mr. Malcolm.

1845.—Mr. Norbert Rillieux, of Louisiana, conceived the idea that the hot vapor arising from a vessel of boiling sugar cane juice could be used to evaporate the water contained in a second vessel of cane juice, foundation of the present system of **evaporation in making sugar**.

1845.—French Bros. established a business in Cincinnati for the purpose of supplying fresh milk to consumers, which developed successfully, leading to the building of a creamery at Lebanon, Ohio, in 1898.

1845. October 13th.—Lady Suffolk, first 2:30 trotter, appeared, making the mile over the Hoboken, N. J., track in 2:29½. She was a gray mare, sired by Engineer, dam by Don Quixote, and was driven by David Eryan.

1845.—Potato blight first appeared in England and Ireland.

1846.—The Bleeding-heart Rose first introduced into the gardens of English-speaking people, the London Horticultural Society having received from China a single plant.



A modern exhibit of yellow corn at the Illinois State Fair.

1846.—Reid's Yellow Dent Corn, a light yellow variety, originated this year with J. L. Reid, of Delavan, Ill.

1846.—The summer of this year was unprecedentedly hot throughout England, and all the horticultural journals united in pronouncing the bloom of roses that season unsurpassed by the bloom of any previous year.

1846.—First American Shorthorn Herd Book issued by Lewis F. Allen, of Black Rock, N. Y.

1846.—English corn (wheat) laws abolished.

1846.—The Horticulturist, an influential farm paper, established by Mr. Luther Tucker, edited by Mr. Andrew Jackson Downing, and discontinued at his death.

1846.—In the early part of this year a Mr. H. R. Smith reached Chicago from New Jersey. He went down into the state of Illinois and bought 225 head of good, fat, old-fashioned cattle at \$16.50 per head. He drove them to New York and they were the first cattle driven from Illinois to that city of which there is record. In 100-days' driving over public roads and swimming streams the cattle reached their destination, the expenses being \$5.50 per head, making a total cost of \$22.00. The cattle brought \$40.00 per head in New York, netting the enterprising drover more clear profit than the cattle raiser obtained altogether for breeding and raising these good three and four-year-old steers. No truer example can be shown of old-time conditions.

1846.—Experiments begun in New York towards preserving (canning) milk.

1846.—Mr. J. Boydell, of England, constructed an engine that laid its own track as it traveled over the ground.

1846.—The Genesee Farmer for March of this year speaks of the unexpected success of the Cortland County Agricultural

School, Mr. Woolworth, the lecturer, addressing twenty-five to thirty farmers once a week.

1846.—Hereford Herd Book commenced by Mr. T. C. Eyton, of Eyton Hall, Salop, England, in 1846. The first two volumes contained 901 bulls, but no cows.

1847.—First systematic irrigation in the arid West by the Mormons on the land where Salt Lake City now stands.

1847.—In three years (ending 1847) average wheat crop of Island of Guernsey was seventy-six bushels per acre.

1847.—A Mr. Martin erected a cotton-seed oil mill at New Orleans.

1847.—Extract from the book entitled "The Farmers' Companion," by Hon. Jesse Buel, of Danbury, Conn.: "The new system of husbandry is based upon the belief that our lands will not wear out, or become exhausted of their fertility, if they are judiciously managed; but, on the contrary, that they may be made progressively to increase in product, in rewards to the husbandman and in benefits to society, at least for some time to come. It regards the soil as a gift of the beneficent Creator, in which we hold but a life estate, and which, like our free institutions, we are bound to transmit unimpaired to posterity."

1847.—Two patents issued by the United States on artificial method of hatching chickens.

1847.—Millet recommended as a soiling crop in Patent Office Report.

1847.—James K. Polk, a pacer, whose pedigree has been lost sight of, covered a distance of three miles in harness in 7:44.

1848.—Todd Bros. & Haskins, near Wakeman, Ohio, bought a boar of what was called the Large Grass Breed from Joel Mead, of Norwalk, Ohio, for the improvement of the Chester White hogs.

1848. March 31st.—Mr. William Saunders, a Scotch gardener, arrived at New Haven, Conn., to serve as gardener for Mr. Bostwick. He was a great writer on agricultural subjects. He introduced fixed roofs for greenhouses in this country, and for thirty-eight years was in the service of the government, doing the most important work as a landscape artist. He is largely responsible for the beautification of the National Capital. He died in 1900.

1848.—David Rankin, famous successful farmer and feeder, fed his first cattle in this year in Henderson county, Illinois. He afterwards moved to Tarkio, Mo., becoming the largest corn grower and stock feeder in the United States. Ordinary feeding by the year 1900 amounted to 12,000 cattle and 20,000 hogs a year.

1848.—Manual of the Botany of the United States issued by Asa Gray.

1848.—In this year Mr. John T. Alexander, a Virginian by birth, but raised in Ohio, bought land in Morgan county, Illinois, at \$3.00 per acre. Mr. Alexander was a great pioneer cattle feeder and dealer, he with Christian Hays being a large buyer and drover of Texas cattle. He used to ship to the East by driving to Toledo, Ohio, thence to Dunkirk by lake steamer, then by cars to New York, a part being afterwards sent to Boston.

1848.—Bull's Head Stock Yards, Madison street and Ordway avenue, Chicago, established by John B. Sherman.

1848. December.—First live stock shipped to Chicago by rail. Millican Hunt, hauling a sled-load of hogs to market, found no snow beyond the Des Plaines river on which to draw his pigs, but found the construction train of the Chicago and Northwestern Railroad, then called the Galena Road. His porkers rode ten miles to Chicago behind the "Pioneer," the famous little engine which also hauled the first load of wheat to Chicago in the same year.

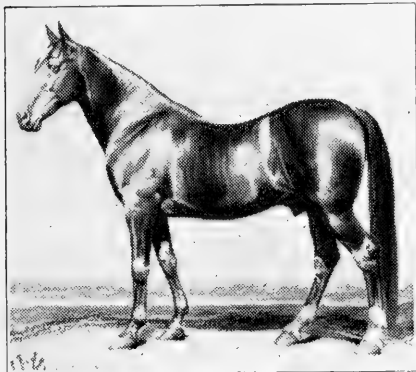
1848.—About this time a few Guernsey cattle were owned in the vicinity of Philadelphia, Pa.

1849.—In this year Moyamensing Pine, a strawberry produced from Hovey's Seedling, was awarded the prize offered by the Philadelphia Horticultural Society for the best new berry.

1849.—At this time the scythe and cast-steel fork manufactory of D. G. Millard, near Clayville, N. Y., was manufacturing 15,000 dozen of scythes and forks annually by water power.

1849.—Crown Prince calved. He was one of the greatest stock bulls of the celebrated **Booth Shorthorns.**

1849.—Rysdick's Hambletonian foaled in this year in Orange county, New York; died in 1876.



RYSDICK'S HAMBLETONIAN.—Sire of trotters. Picture taken in his old age. From copyright photograph, by permission of Schreiber & Sons, of Philadelphia.

1849.—In this year the factory of R. B. Dunn, in North Wayne, in Maine, turned out 12,000 dozen scythes.

1849.—The Valley Farmer, afterwards **Colman's Rural World**, of St. Louis, Mo., established as a monthly by Norman J. Colman, assisted by Wm. Muir and C. W. Murtfelt, Associate Editors.

1849.—Zachary Taylor, **President of the United States**, and served one year until his death.

1849.—Reaping machine first made in the Champion factory at Springfield, Ohio.

1849.—James Vick began to grow flower seeds in New York state.

1849. July 2d.—Pelham trots a mile in 2:28 at Centerville, N. Y., making a world's record.

1849.—Mormons of Utah practice irrigation in agriculture, the first by Anglo-Saxons in the United States.

1849.—Dr. James B. Davis, of Columbia, S. C., imported nine **Angora goats**, a present from the Sultan of Turkey. They were two bucks and seven does.

1850.—Moore's Rural New Yorker established at Rochester, N. Y., by D. T. Moore, Editor. Hon. Henry S. Randall, LL. D., was Editor of the Sheep Department, and Dr. Daniel Lee Southern, Corresponding Editor.

1850.—In this year a **Shorthorn** cow named Grace was killed in New York state. Her live weight was 1,795 pounds. She was found to be with calf. Her calf and appendages weighed 60 pounds. Her dressed carcass weighed 1,210 pounds, her hide 101 pounds, and tallow 153 pounds. Total weight, 1,464 pounds; shrinkage, 271 pounds. This is a yield of 84 pounds 6 ounces of dead weight to every 100 pounds of live weight, making her shrinkage less than 16 per cent. Her tongue, liver, heart and tripe, if weighed, would have reduced her shrinkage to 14 per cent. Grace was fed by Colonel Sherwood, of Auburn, N. Y.

1850.—Dr. Hand, of Baltimore county, Maryland, began his work which finally produced the "Trophy," the variety which made the **tomato** a profitable garden vegetable.

1850.—John Johnston, a Scotch farmer near Geneva, N. Y., introduced and advocated a system of **farm drainage by tiling.**

1850.—The **Wild Goose plum** was first brought to notice by James Harvey, of Columbia, Tenn. Some time before 1850 a man shot a wild goose near Columbia, and on the spot where the carcass was thrown the plum came up the following spring. It is our most popular plum, and was introduced by D. S. Downer, of Fairview, Ky., in the year mentioned.

1850.—Dr. John Gorrie, of Florida, the original inventor of the artificial production of ice, patented his **ice-making machine.**

1850.—The **Ingram apple**, famous for productiveness and long keeping qualities, originated from planting seeds of "Ralls" by Mr. Martin Ingram, six miles east of Springfield, Mo.

1850.—The **Dorchester**, the first named **tame blackberry**, introduced by Mr. Lovett, of Massachusetts.

1850.—Cattle bred in Texas being driven through Arkansas, Missouri and Kansas, for distribution and sale to feeders, caused a mysterious and fatal disease amongst the native cattle. First mention of **fever caused by Texas cattle.**

1850.—About this time a Mr. Goodrich introduced new wild strains of **potatoes** from South America, and, growing them for fifteen years, produced the **Garnet.**

1850.—Previous to this year practically all the **cheese made in this country** was a farm and not a factory product.

1850.—The **Delaware**—the fourth great **American grape**—found in a New Jersey garden. It enjoys the distinction of being the only one of the four which gives strong evidence of "foreign blood," being considered a cross between the fox-grape and a European vine.

1850. May 15th.—Dispersion sale of **Short-horn cattle** bred by Thomas Bates, deceased, at Kirklevington. Sixty-eight head averaged \$324.28.

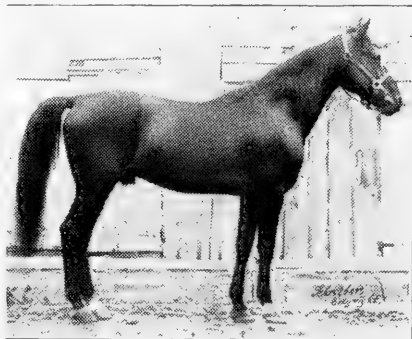
1850. July 16th.—Millard Fillmore, elected Vice-President, succeeds to the **Presidency of the United States**, and serves nearly three years.

1850.—Aquila Young & Everette, of Mount Sterling, Ky., owned Imp. Mammoth, the **largest jack** imported up to that time.

1850.—Abel Houghton, of Massachusetts, produced the **Houghton gooseberry** from seed of the wild berry.

1850.—The amount of **butter** made this year on the farms of the United States was 213,345,306 pounds.

1850.—Ethan Allen, 2:25½, famous **trailing sire**, foaled in this year.

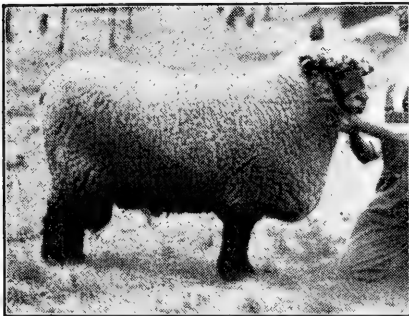


ETHAN ALLEN, 2:25½.—The first stallion to beat 2:30. From a copyright photograph by permission of Schreiber & Sons, of Philadelphia. This is one of the earliest high-class untouched animal photographs in existence. Although it is forty-six years old, Messrs. Schreiber & Sons are still the leading photographers of domestic animals.

1850.—Importation of **Spanish red hogs** by Hon. James B. Clay, of Kentucky.

1850.—First steam engine for purpose of tillage placed on the market by John Fowler & Son, of Cornhill, London.

1850.—Wm. Chamberlin, of Dutchess county, New York, imported 250 head of Silesian Merino sheep.



OXFORD DOWN RAM—A champion at the Iowa State Fair.

1850.—Oxford Down sheep coming into notice, principally in Oxfordshire, England.

1850.—First recorded Galloway cattle imported into Canada by Graham Bros., of Vaughn, Ontario.

1850.—United States Census reported 1,449,073 farms in the United States.

1850.—The peppermint plant industry assumed its greatest proportions in England, declining since that year.

1850.—Only three states reported over 20,000,000 acres of farm land. Virginia, 26,152,311 acres; Georgia, 22,821,279 acres; and North Carolina, 20,996,983 acres.

1850.—Center of number of farms in the United States, ten miles south of west of Parkersburg, W. Va., in Athens county, Ohio.

1850.—Center of United States population, twenty-three miles southeast of Parkersburg, W. Va.

1850, December 29th.—Commissioner J. R. Bartlett, appointed to run the boundary line between the United States and Mexico, visited the hacienda of Senor Don Manuel Gandera in the province of Sonora. This ranch had 16,000 sheep, 700 mules, 108 stud horses, 1,620 breeding mares and 6,600 calves. The farm produced 26,000 bushels of grain a year.

1851.—First public Agricultural Experiment Station established at Mookern, Germany, under the auspices of the University of Leipzig.

1851.—Mr. Lorillard Spencer, of New York, imported the Bates Duchess Short-horn bull Duke of Athol, first bull of this family to arrive in the United States.

1851, January.—Here are a few items from an old New York market report in the American Agriculturist: White beans, 75c. to \$1.50 per bushel; table butter, 15 to 25c. per pound; shipping butter, 9 to 15c.; cheese, 5 to 10c. per pound; cotton 12 to 15c. per pound; wheat, Western, \$1.00 to \$1.25 per bushel; red and mixed wheat, 90c. to \$1.10 per bushel; rye, 75 to 80c.; corn, Northern, 69 to 74c.; corn, Southern, 68 to 72c.; barley, 88 to 93c.; oats, 48 to 53c.; hay in bales, per 100 pounds, 70 to 75c.; mess beef per barrel, \$7.00 to \$10.00; beef, prime, per barrel, \$3.75 to \$5.25; smoked beef, 6 to 12c. per pound; rounds in pickle, 4 to 6c. per pound.

1851.—Charles Fullington, of Union county, Ohio, imported the famous French draft stallion, Louis Napoleon, a short-legged, closely-ribbed, blocky and compact gray, three years old. He was afterwards sold to A. P. Cushman, of DeWitt county, Illinois.

1851.—In this year Jacob Fussell, a milk dealer delivering on four routes at Baltimore, Md., engaged in the wholesale ice cream business. In those days the little ice cream which was sold was by confectioners. They bought cream of him in an irregular

way, and, as sweet cream was hard to keep on hand, he began using up his surplus by manufacturing ice cream. He also did business in Washington, D. C., and in 1863 established the first wholesale ice cream establishment in New York City. Mr. Fussell was in active business for forty-five years, when his sons succeeded him.

1851.—A European grape successfully cultivated around Missions, in California, now known as the "Mission Grape."

1851.—In the American Agriculturist of February, 1851, an article appears entitled "Large Cattle in Kentucky," by James G. Kinnaird, of Solitude, Fayette county. The fat cattle belonged to Mr. C. W. Innes, of Fayette, and won prizes for beef cattle. On exhibit, these steers weighed 2,710 and 2,740 pounds at five years old. The same exhibitor had thirty-nine head, averaging in weight from 2,000 to 2,435 pounds. Mr. Innes also had a Shorthorn bull which weighed 1,752 pounds. This was at the first Kentucky Fair, held at Lexington, October 1850.

1851.—At Mount Fordham, New York state, in the year 1851, and the 24th of June, a public sale was held by Mr. Morris, a Shorthorn cattle breeder. Colonel James M. Miller was the auctioneer, "who conducted the sale with his usual ability and dispatch." The sale included bulls at \$50 to \$175, and females at \$30 to \$175. The top-price bull was Logan, twenty-three months old, sold to Oliver Slate, Jr., of Throgs Neck, N. Y. The top-price female was the four-year-old Red Lady, sold to General Cadwallader, of Philadelphia. The sale was reported originally by the American Agriculturist.

1851.—A Mr. Wolfskill planted eighty acres of apricots and peaches and 9,000 grapes in the town of Winters, in Yolo county, California, in 1851. In 1885 the first apricots from these trees were sold. First commercial orchard of record on the Pacific Coast.

1851.—Reaping machines (McCormick's and Hussey's) first introduced in England from the United States.

1851.—Fire in Edinburgh, Scotland, destroyed all pedigrees and papers relating to Galloway cattle.



MR. W. H. SOTHAM, early importer of Hereford cattle into the United States and a great advocate of the breed.

1851.—Exhibition of the Industry of All Nations at London; great help to agriculture.

1851.—In this year racing was inaugurated in California. A small schooner arrived at San Francisco from Sydney, Australia, called the *Sea Witch*. Among her passengers was an Englishman named J. Cooper Turner, who had with him two stallions, a black mare and a gray gelding. The mare was called *Black Swan*, and she afterwards won a **great race of six miles**, ridden by Alexander Marshall, for a wager of ten thousand head of Spanish cattle (then worth about \$4.00 per head) between Don Pio Pico and Don Jose Sepulveda, the former of whom owned Sarco, who started favorite in the race. *Black Swan* led by seventy yards to the three-mile stake, where David K. Tidwell held a bucket of water and sponged her mouth out. She was at least two hundred yards behind Sarco when her rider got her going again, but she won by over thirty lengths. The stallions of the importation were named Chloroform and Muley.

1851.—Captain J. T. Davy began the publication of a **Devon Herd Book**, recording American pedigrees ten years farther than the oldest published for English herds.

1851.—First **cheese factory** in the United States established in Oneida county, New York.

1851.—At the first International Exposition held at Hyde Park, London, in this year, four prize medals were awarded to **American sheep**.

1851.—Messrs. Calloway & Purkis, of England, with a view to improvement in steam culture, constructed a **neat locomotive** with two main traction wheels of eighteen inches tread with a truck forward for a steering apparatus.

1851.—**American plows** demonstrated their superiority over English plows at Hounslow, England, during the first International Exposition.

1852.—Mr. John Delafield, of Oaklands, near Geneva, N. Y., imported the first **tile-making machine** for farm drainage.

1852.—In January of this year the **Ohio Farmer** was established at Cleveland, Ohio, by Thomas Brown.

1852.—First crop of "**lemon yellow**" tobacco produced on Sandy Ridge, in Caswell county, North Carolina.

1852.—General trial of **mowers and reapers** at Geneva, N. Y.

1852.—Large importation of **Andalusian jacks**, by Leonard Bros., of Mount Leonard, Mo.

1852.—**Reaping machine** of home production, invented by Rev. Patrick Bell, of Farnshire, awarded premium by Highland Society. Had been in use fourteen years.

1852.—In the early summer of this year Tom C. Ponting, of Moweaqua, Ill., went to Texas on horseback and **bought 800 steers**, there which he drove home and fed, the drive occupying one year. He afterwards shipped them from Muncie, Ind., to New York.

1852.—At this period, at the site of the present city of **El Paso, Texas**, there were ranches of Mr. Coon and Mr. Hugh Stevenson, and a small group of buildings called Magdofinsville, owned by James W. McGoffin, a pioneer ranchman.

1853, April 15th.—Through the action and energy of Mr. John Delafield, of Geneva, N. Y., an act was passed by the New York Legislature, establishing a **State Agricultural College**, which was opened seven years later and then closed down again.

1852, December 30th.—A herd of wild mustangs stampeded the wagon train of United States Boundary Commissioner Bartlett in the vicinity of Loma Blanca, on the route to Corpus Christi, Texas. A few hours' after leaving camp the prairie near the horizon seemed to be moving with long undulations like the waves of the ocean. The whole prairie was alive with mustangs. The mules in the train became restive and the teamsters hastened to pack the wagons, but one of the mule teams started the stampede by springing from the train and dashed off at full speed towards the **wild horses**. The avalanche of wild horses swept on like a tornado.

1852.—The prairie dog was mentioned in John Russell Bartlett's *Explorations and Incidents in Texas*: "One of the most interesting animals met with on the prairies and high table-lands is the prairie dog, which is in fact no other than a marmot, having no character in common with dogs. The first community was in Texas, near Brady's Creek, a branch of the Colorado of the East. This was the largest we ever saw, nor have we heard of one as extensive. The extent was ten miles in one direction and fifty in another. Estimate was made of 30,000 habitations to the square mile, or 15,000,000 in all—a **population of 30,000,000 prairie dogs** when figured at one pair to each habitation or hillock.

1852, September 9th.—At Union Course, Long Island, an early pacer named *Pet* established a **mile record of 2:18½**.

1852.—First **trotting sulky without springs** built for Flora Temple. The weight was about ninety pounds.

1853.—Prince, a horse of unknown breeding, **trotted ten miles in 28:05½ minutes**.

1853.—In the winter of this year a Mr. Renick bought 1,200 cattle in Northern Texas and sold them in Illinois. This trade continued until it was exploded by the **Texas cattle fever**.

1853.—Belmont, a thoroughbred stallion bred by Garrett Williamson, of Springdale, near Cincinnati, and three mares were imported into California and left a lasting mark on the thoroughbred horse of California.

1853.—Franklin Pierce elected **President of the United States**, and served four years.

1853.—Through the **Scuppernon grape**, a direct offspring of the Muscadine, discovered on Roanoke Islands, Sidney Waller, of Brinkleyville, N. C., began extolling it in 1853 to the Commissioner of Patents as "the grape of grapes for the South."

1853.—The record for **trotting one hundred miles** was broken by Conqueror, a bay gelding by La Tourette's Bellefounder, dam Lady McLain, by imported Bellefounder. The time was eight hours, fifty-five minutes and five seconds.

1853, June 15th.—Highland Maid, a converted pacer, by Soltram, dam Roxana, **reduced the mile trotting record to 2:27**. She was piloted by F. J. Nodine, of Centerville, N. Y.

1853, July.—R. A. Alexander established a **Shorthorn breeding cattle herd** at Woodburn, Ky., by generous importations of the best of the breed.

1853, July 14.—Tacony **trots in 2:27** on Union Course, L. I.

1853.—In this year a writer in the New York Herald said that four-fifths of the horses hauling the cars on the Sixth Avenue Railroad, New York, were from Vermont and New Hampshire, and nearly all of the celebrated **Morgan breed**.

1853, September 27th.—**Shorthorn cattle sale** at London, Ohio, by Madison County Importing Company. Average for twenty-four cows, \$1,000 per head, including eight which sold for \$1,000 to \$3,000 each.

1853.—**Kentucky sale of Shorthorns** at the farm of B. J. Clay, in Bourbon county. Twenty-five head sold for an average of \$1,941.40 each. Ten bulls sold from \$1,000 to \$6,000 each.

1853.—Mr. Davis, of South Carolina, purchased two head of **Brahmin cattle** from the English Earl of Derby, and brought them to the United States.

1853.—Captain Richard King established himself as a ranchman in Southern Texas and purchased 75,000 acres of land there by starting the Santa Gertrudes Ranch, in Nueces county.

1853.—At Royal Show Yard, Gloucestershire, England, **Shropshire sheep** were recognized as superior. Considered the turning point of the breed.

1853.—In this year special classes for **Welsh cattle** were first instituted at the English Royal Show.

1854.—The Tappahannock found in Virginia, the first variety of **American wheat**.

1854, June.—Cogs in driving wheels of **mowers and reapers** invented by James Buckingham, of Muskingum county, Ohio.

1854.—The Layton, or **New Rochelle, black-berry** was found on the roadside by Lawton at New Rochelle, N. Y., and was valuable and popular for many years.

1854, January 6th.—The **Country Gentleman** established by Mr. Luther Tucker, of Albany, N. Y., under the editorship of Luther Tucker and John Jacob Thomas.

1854.—The first authentic **hybrid grapevine** was exhibited by John Fisk Allen—a hybrid between the Golden Chasselas and the Isabella.

1854.—First importation of **Scotch-bred Shorthorns** by the Shakers of Union City, Warren county, Ohio.

1854.—Michigan Southern Railway opened **stock yards** at corner of State and Twenty-second streets, Chicago, Ill.

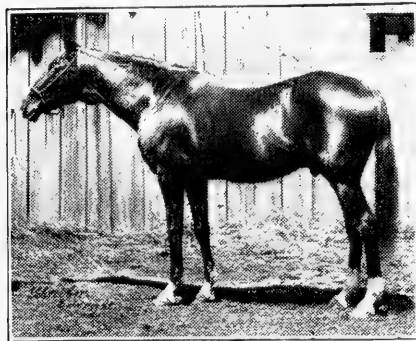
1854.—First importation of **Shorthorn cattle** into Wisconsin by Mr. John P. Roe, of Waukesha county.

1854.—Royal Agricultural Society of England awarded silver medal to Mr. John Fowler for **steam draining apparatus**, called Fowler's Draining Plow.

1854.—Dillon Bros., of Normal, Ill., purchased one of the **horses of the French importation** of 1851 and won many prizes under the name of "Norman."

1855.—Mr. Wm. Smith, of Woolston, Bedfordshire, England, used **steam power in plowing**; also a subsoiler of his own invention.

1855.—**Hampshire Down sheep** introduced into the United States, mainly in the South; scattered and practically exterminated during the war.



THOROUGHBRED HORSE—LEXINGTON. From copyright photograph by Schreiber, dated 1872. He was the greatest race horse of his day and famous sire. He was then twenty-two years old, and died three years later.

1855, April 2d.—A **great race between the thoroughbreds**, four miles. Lexington reduces Lecompte's time of 7:26, establishing a record for the time of 7:19½, which was unbeaten for many years.

1855.—A combined **clover huller** exhibited at the New York State Fair at Buffalo.

1855.—A few **Shropshire sheep** imported from England into the state of Virginia.

1855.—Lewis F. Allen, of Black Rock, N. Y., issued second volume of the **Shorthorn Herd Book**.

1855.—Obed Hussey, of Baltimore, invented and put into operation a **steam plow**.

1855.—According to A. C. Landry, "the two successful **pioneer oil mills** of New Orleans were the Blenville, built and operated by Messrs. Pierre Paul Martin and Paul Aldige, and the Magazine Oil Mill, owned and operated by Ambrose Maginnis, Sr. Both of these mills were built and began operations in the fall of 1855. There is a rivalry between these mills as to which was

the actual pioneer, and the question was never settled to the mutual satisfaction of the contending parties." By other authorities the **Martin Mill** was credited with having started in 1847.

1855.—In a review of the Chicago live stock history by the Drovers' Journal, Mr. Jno. T. Alexander is mentioned as one of the **greatest cattle buyers** ever on the Chicago market. In this year he shipped 5,000 head; in 1856, 10,000 head; in 1857 he shipped 15,000 head. He was a cattle raiser in Illinois and a speculator also. During that time he practically monopolized the buying of cattle suitable from Eastern markets. With the principal railroad then running to New York Mr. Alexander made a contract to ship 1,000 cattle a week, thereby securing a greatly reduced freight rate, which cattle raisers and other dealers could not touch. Mr. Alexander did not own a packing house, but he made larger amounts of money in rebates than are now considered to be fair packing-house profits.

1855, June 11.—Smithfield, in London, used for the last time as a **live cattle market**.

1855, June 21st.—At Union Course, Long Island, the mare Pocahontas established the **pacing record** to wagon at 2:17½. She was bred by John C. Dine, of Butler county, Ohio, by Iron's Cadmus, he by Cadmus, son of American Eclipse.

1855.—Colonel C. L. Carter, pioneer Texas ranchman, settled in Palo Pinto county. He was afterwards one of the original organizers of the "round-up" system of gathering cattle and President of the **Northwest Texas Cattle Raisers' Association**.

1855.—Col. Agoston Haraszthy introduced **French grapevines** into California after an extended European investigation.

1855, October.—At the Florence, Kentucky, Fair, Black Hawk, a Morgan stallion, exhibited by P. & L. Melendy, of Hamilton county, Ohio, won the first prize in **class for harness stallions** four years old and upward.

1855.—It was in this year when **cattle first began to arrive at Chicago** from Texas in droves. J. G. Law & Co. packed 3,000 head of them in 1859, and other packers salted large numbers of them. The Civil War temporarily stopped this trade.

1855.—In this year Mr. Peter M. Gideon, of Minnesota, began a series of discouraging experiments in order to discover an apple tree able to withstand the severe winters of his section. In twelve years he grew one seedling of the **Cherry Crab**, which proved hard. This was named "Wealthy," and upon this foundation the **apple culture of the Northern Minnesota region** has been built.

1855.—The Royal Herd Book of **Hereford cattle** at the Fleming Farm, Windsor, England, was founded in this year.

1856.—Charles Goodnight, **Texas pioneer cattle raiser**, arrived at the San Saba river with his partner and W. J. Sheek, and came from Illinois.

1856.—George Wilkes, 2:22, a great sire of trotters, a famous son of Hambletonian, 10, was foaled in this year. His dam was Dolly Spanker. He died in 1882.

1856.—Richard Ten Broeck sailed for England with a **stable of thoroughbreds**—first American to invade the English turf.

1856.—In this year the seed of the Chinese sugar cane, or sugar **variety of the sorghum**, was introduced into the United States.

1856.—The process of **condensing milk** invented by Gall Borden, of Galveston, Texas. He was born at Norwich, N. Y., in 1802, and was the first white settler at Galveston, Texas.

1856.—First Parisian live stock exhibition under the patronage of the Emperor Napoleon III. Large and important exhibit of **English, Scotch and Irish cattle**.

1856.—A **fig tree** planted in this year is now one of the great horticultural curiosities of California. On Bidwell Ranch, 139 miles north of San Francisco.

1856.—In this year J. P. Anderson engaged in **cattle raising in California**, being one of the pioneers of the Pacific Coast in that occupation. Forty-nine years later he shipped train consignments of his own cattle from Nevada to the Kansas City market.

1856.—Rev. Benjamin M. Nyce, "preacher, teacher and chemist," of Decatur county, Indiana, through insulation of buildings, developed an **ice-storage house**, which is the origin of the modern refrigerator. He stored fruits successfully for a rise in market prices.

1856.—This year was noted for **failure of crops in France**.



HIRAM WOODRUFF—Born, 1817; died, 1867. Famous as trainer and driver of trotters. He had the skill of the master, the affection of animals and the confidence of men. Picture from his book, "The Trotting Horse in America."

1856, September 2d.—**Flora Temple**, by Bogus Hunter, dam by Terry Horse, trotted the Union Course, East New York, in 2:24½. She was driven by the renowned horseman, Hiram Woodruff.

1856.—The Collynie herd of **Shorthorns**, established by Mr. Wm. Duthie, Sr., of Aberdeen, Scotland.

1856.—Lear Bros., of Kentucky, owned the **large jack Buena Vista** by Imported Mammoth.

1856.—Colonel Richard Peters, of Atlanta, Ga., commenced breeding **English Berkshire swine**.

1856.—The United States Agricultural Society at Philadelphia awarded Colonel Richard Peters, of Atlanta, Ga., a special premium of \$1,000 on the **Angora goats** of the Davis importation.

1856.—**American Agriculturist**, monthly farm paper, purchased by Mr. Orange Judd, Associate editors, Rev. W. Clift, M. C. Weld, Dr. Geo. Thurber, Joseph Harris, Henry Stewart and Dr. B. D. Halsted.

1856.—In this year the first **Angora goats** received from Victoria, Australia, consisted of seven head, brought from Turkey by Mr. Sichel, a Melbourne merchant. These goats averaged a fleece of two pounds nine ounces when the flock had increased to 108 head.

1856.—First grafting of the **prune** at San Jose, Calif.

1856.—In his "Fruit and Fruit Trees of America," published this year, A. J. Downing claimed that the **American or Newtown Pippin**, propagated in Rhode Island, was admittedly the finest apple in the world.

1856, October 16th.—Opening of the **Great St. Louis Fair**. Original Directors: A. Harper, T. Grimsley, J. M. Chambers, J. R. Parret, H. T. Blow, H. C. Hart, J. Withnell,

T. T. January, C. I. Hunt, H. S. Turner, F. Dings and Norman J. Colman. Officers were: J. R. Barrett, President; A. Harper, T. Grimsley and H. T. Hart, Vice-Presidents; Norman J. Colman, Recording Secretary; Oscar Collet, Corresponding Secretary; and H. S. Turner, Treasurer.

1857.—On February 9th, Congress passed a bill providing for the construction of a **wagon road across the country** to the Pacific Ocean.

1857.—James Buchanan, **President of the United States**, and served four years.

1857.—The Cumberland Agricultural Society organized, becoming afterwards the **Agricultural Society of New South Wales, Australia**.

1857.—In the "American Journal of Science" Dr. Gray showed that, although the **pumpkin's origin** was popularly supposed to be in the Levant, there is good reason for believing it to have been cultivated in America by the Indians before the coming of the whites.

1857.—The United States War Department introduced **camels into the country** for use in the dry territories. Seventy-five were bought in Egypt and Asia Minor by Major Charles Wayne. The naval transport Supply brought the cargo of camels. They were landed on the Texas coast, and under the care of Captain J. N. Palmer half of the herd was driven overland to Camp Verde, Ariz., and the others left at Indianola, Texas. The camels did not thrive under treatment by American teamsters, and, being neglected during the war, the experiment was a failure.

1857.—A gray horse named General Taylor, by Morse Horse, dam Flora, untraced, **trotted thirty miles** in 147:59.

1857.—Between this year and 1862 Mr. Winthrop W. Cheney made three importations of pure-bred **Holstein-Friesian cattle**.

1857.—Samuel William Johnson appointed Agricultural Chemist at Yale College. **Author of famous popular works:** "How Plants Grow," "How Plants Feed."

1857.—The **trotting record for three miles to wagon** in a race was placed at 7:53½ by Prince, a chestnut gelding, whose pedigree is unknown.

1857, April.—**Hereford Journal** established at Owego, N. Y., by W. H. Sotham.

1857, May 13th.—At Lansing Mich., the **State Agricultural College** was formally opened with sixty-one students and five professors. This is the first of the states to put in actual operation a true agricultural college.

1857, August 27th.—**Shorthorn cattle sale** at Springfield, Ill. Average for twenty-seven animals, \$1,165 per head.

1857.—Mr. B. F. Harris, of Champaign, Ill., marketed a **load of cattle at Chicago** averaging 2,736 pounds, and the heaviest load ever sold on that market. These cattle were picked out of 100 head which Mr. Harris had fed to the remarkable average of 2,277 pounds. Mr. Harris at this writing is alive and well. He is the champion feeder of heavy cattle.

1857, December 14th.—Mr. Morrell introduced a bill in Congress providing for donations of land to states and territories which may provide **agricultural colleges**.

1857.—In this year the Globe Sickle Factory of Pittsburgh, Pa., was **turning out sickles** to greater value than all the other factories in the United States.

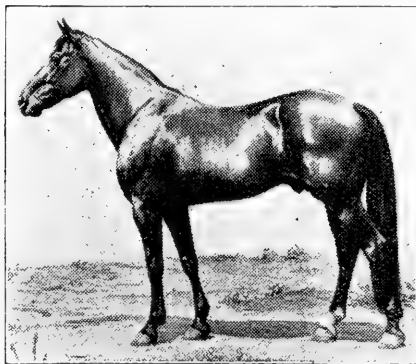
1857.—In this year, in the state of Mississippi, a law was passed requiring every cotton ginner to remove and destroy all **cotton seed**. Failure was punishable by a fine of \$20 for every day in which he neglected to do so. Thus it appears that cotton seed was considered to be a nuisance, and an accumulation thereof a danger to the community. Cotton seed was usually dumped into a stream of flowing water.

1858.—The first **Argentine (South America) Rural Society** organized through the efforts and advice of Don Eduardo Olivera, a student in London. The first President was Gen. Gervasio A. Posadas. A more effective organization followed in 1866.

1858, October 10th.—At nine o'clock in the evening the first overland mail from California was delivered to the proper officials in St. Louis, Mo.

1858.—Messrs. Gundlach & Dressel, of Sonoma, Calif., imported choice varieties of **French grapevines**, especially from the Rhine provinces.

1858.—Nelson Morris commenced slaughtering operations at Twenty-first street, Chicago—origin of one of the **greatest packing houses** in this country.



GEORGE WILKES, 2:22—Son of Hambleton and sire of a distinguished family of trotters, whose name and fame are growing greater every day. From copyright picture by permission of Schreiber & Sons.

1858.—In this year Thomas H. Burrige, of St. Louis, Mo., invented and built a **traction steam engine** intended chiefly for field culture.

1858.—J. S. Rarey, an American, first exhibited in London, England, **taming vicious horses**.

1858.—Clydesdale stallion imported into Ohio by Fullerton & Co.

1858.—Colonel Richard Peters, of Atlanta, Ga., imported **Brahmin cattle**.

1859, May.—Farmers prospecting on the plains of Nebraska, **reported snow** two feet deep.

1859.—In the month of April of this year the first issue of the **Nebraska Farmer** was published by Mr. R. W. Furnas. It was a monthly, sixteen-page, three-column paper, the columns being nine inches long. Mr. Furnas continued publication until April, 1862, when he exchanged the pen for the sword and went to the war. He was afterwards Governor of Nebraska, and at the time of his death was Secretary of the State Board of Agriculture.

1859.—A **National Fair** was held at Chicago in this year.

1859.—Mr. J. H. Pickrell, of Harristown, Ill., first actively identified with **Shorthorn cattle interests**. Afterwards Secretary of the American Shorthorn Herd Book.

1859.—**Hampshire Down sheep** mentioned as probably a cross breed of Cotswolds and Leicesters by Royal Agricultural Society.

1859.—**Shropshire sheep** awarded a place on prize sheet of the Royal Agricultural Society of England.

1859.—**Cotton shipments** from Bombay, East Indies, to Europe and England, 622,319 bales. American crop same year, 4,861,000 bales; total exports, 3,774,000 bales.

1859.—**Pleuro-pneumonia in cattle** appeared in this country, being imported from Holland.

1859.—In September of this year the **Maryland Agricultural College** was formally opened.

1859, July 20th.—Fawkes' **American Steam Plow**, a gang of fourteen-inch prairie plows, was tried at Philadelphia in this year. The

mean rate of speed was four miles an hour, and the united furrows were nine feet four inches wide. It plowed 4.3 acres an hour, and was satisfactory to the committee and spectators.

1859.—The Farmers' High School of Pennsylvania (now the **Pennsylvania State College**) opened for students in this year. Dr. Evan Pugh was the first President.

1859, October 15th.—Flora Temple **reduced the trotting record** to 2:19 $\frac{3}{4}$ at Kalamazoo, Mich. She beat her own record three times in two months during this year under the guidance of James D. McManus.

1859, May 5th.—First shipment of **cattle** from St. Joseph, Mo., to Eastern markets.

1860.—The United States Census Superintendent, in his introduction to the agricultural division of his work, said: "We have two **agricultural colleges** in active operation and others in progress of organization. Our young men are beginning to realize that agriculture is worthy their highest ambition, and that in no other pursuit will intelligent labor meet with a surer reward."

1860.—Owing to the scouraging and exhaustive system of husbandry practiced in the United States, it was stated in the Mark Lane Express of England that the **grain-exporting power** of the United States was likely to diminish rather than increase.

1860.—Goodenough's **horseshoes**, made by machinery, put on cold, patented in this year.

1860, September 27th.—Visit of the Prince of Wales, then heir to the British Throne, to the **St. Louis Fair**.

1860.—The **Chautauqua grape industry** began. In 1900 the Chautauqua grape belt contained 25,000 acres of vines, of which 85 per cent. were of the Concord variety.

1860.—Great deposits of **potash salts** found near Strassfurt, Germany, which are now largely used for fertilizers.

1860.—Census of this year the first to report in detail the quantity and value of **commercial fertilizers** manufactured in the United States.

1860.—**Lincoln sheep** first given a class in English Agricultural Society.

1860.—**Small Yorkshire swine** introduced into the United States—a pure hog of English York and Cumberland breeds.

1860.—**Paris green** first used in Eastern States to kill potato bugs.

1860.—A grower of Garnet Chili potatoes preserved a seed ball of this variety, pinning it against his window until it was old and dry, when he gave it to Mr. Albert Breese, of Vermont, who planted the seeds and produced a number of good, bad and indifferent tubers and including one plant which surpassed all others. This was named the **Early Rose**, which became the leading variety in America.

1860.—In this harvest season four thousand **McCormick reapers** were reported to have been sold to farmers around Chicago.

1860.—Flora Temple **trotted three miles** in harness, against time, in 7:33 $\frac{3}{4}$. She was by Bogus Hunter, dam Madam Temple, by Terry Horse, and was one of the greatest trotters of her time.

1860.—**First cotton mill** in Texas built at Huntsville by the state government.

1860.—In the fall of this year the first **New York Agricultural College** was opened at Ovid under Presidency of Major M. R. Patrick, but was closed again, owing to the breaking out of the Civil War, and was not opened again as a college.

1860.—In the year 1860 Illinois was seventh in the number of states as a **pork and beef-packing center**. California was first, with 199 houses; Pennsylvania second with 106; New York third, with 91; Ohio fourth, with 55; New Hampshire fifth, with 46; New Jersey sixth, with 28; and Illinois seventh, with 22. Ten years later Chicago alone had 31 packing houses. In 1880 Chicago had 70 packing houses.

1860, December 11th.—Parker Curle, Superintendent of a Louisville slaughtering house, with one set of hands, killed 2,171 hogs in one day.

1860.—Ground broken at Kansas City for the **Western Pacific Railroad**.

1860.—At the beginning of the year 1860 the book entitled "**Industrial Chicago**" enumerates the beef packers as follows: R. M. & O. S. Hough established in 1850; Cragin & Co. in 1854; Van Brunt & Watrous in 1858; Gurdon S. Hubbard in 1834; Hayward, Bloomfield & Co. in 1858; A. S. Brown & Co. in 1853; and Clybourne & Co. in 1857. The hog packers were Jones & Culbertson in 1858; Tobey & Booth in 1852; Leland & Mixer in 1859; George Steel in 1843; C. & J. Stewart in 1857; Thomas Nash in 1857; J. G. Law, succeeding Moore & Seaverns, in 1858; Patrick Curtiss in 1858; Burt & Higgins in 1858; Holder & Priest in 1858; Louis Richberg in 1858; Smith & Son in 1858; Reynolds & Lunt in 1857; Noyes & Co. in 1858; Charles Silver in 1858; and E. A. Kent & Co. in 1860. The first summer meat packing is credited to Tobey, Booth & Co., and Van Brunt & Watrous.

1860.—Bone black as clarifying or refining agent no longer used in **sugar refining**, being substituted by a sulphurous gas.

1860.—In this year five **bushels of corn** were raised in the United States for every **single bushel of wheat**. Illinois led the corn with 115,174,774 bushels; also the wheat with 23,837,023 bushels.

1860.—Allen's Red Prolific and Allen's Antwerp raspberries introduced to the public, being improved sorts of the **English red raspberry**. Improved by L. F. Allen, of Black Rock, N. Y.

1860.—The census of this year says that the **premium on gold** increased the price of farmers' wheat three to eight-fold. The large margin was in favor of the Western wheat grower.

1860.—No. 2 **cash wheat** ranged from 66 cents per bushel in December to \$1.13 in April.

1860.—The Department of Agriculture introduced the **Italian bee** into this country.

1860.—Truck growers in Norfolk, Va., first to demonstrate that **strawberries could be grown** and ripened long in advance of the Northern crop. The industry failed because the crop spoiled in transit, there being no refrigerator cars at that time.

1860.—The United States Census reported 2,044,077 **farms in the United States**, an increase of 595,004 in ten years.

1860.—Center of number of farms in the United States, forty miles northeast of Cincinnati, in Clinton county, Ohio.

1860.—Center of United States population, twenty miles south of Chillicothe, Ohio.

1861.—Youatt (on the Horse) said: "The **English (Shire) draft horse** sprung from Flemish blood."

1861.—Duchess **Shorthorns** exported to England by Mr. Samuel Thorne, of New York state.

1861.—Early war prices of **cotton**: Highest price middling upland cotton, 33 cents; lowest of the year, 11½ cents.

1861.—Low price of **wheat**: June and July, 55 cents; highest, in May, \$1.25.

1861.—Mr. Alfred I. Smith, improver of **Suffolk horses**, established a stud at Woodbridge, Suffolkshire, England.

1861.—Royal Agricultural Society of England awarded Mr. John Fowler \$100 for the most economical application of **steam power** to the cultivation of the soil.

1861.—First **creamery or butter factory** in the United States started in Orange county, New York.

1861.—In the season of 1861-2 the distinction of being the **leading packing point** in the country passed from Cincinnati to Chicago.

1861.—Of the small fruits the **strawberry crop** is more than all the rest. Average of the United States, 1,701 quarts per acre on 150,000 acres.

1861.—Jerry Burnett, from Bates county, Missouri, **pioneer ranchman**, settled in Denton county, Texas.

1861.—Abraham Lincoln, **President of the United States**, and served until April, 1865, when he was assassinated.

1861.—In this year J. D. Ulrey and his partner, Wm. Veach, were conducting a live stock commission business and stock yards at the corner of Irvin and North avenues, Allegheny, Pa., and practically represented all there was in the **Pittsburgh live stock market**.

1861.—L. Prevost, a Frenchman, began **silk culture of the Pacific Coast** near San Jose, Calif., an industry which did not succeed and was almost extinct by 1877.

1861.—Thomas McCrae, of Guelph, Ontario, Canada, began breeding **Galloway cattle** and started successfully to prove the great merits and high value of the breed.

1861.—Modern herd of **Aberdeen-Angus cattle** established at Ballindalloch, Scotland, by Sir George Macpherson Grant.

1861.—Mr. Wm. Landrum was awarded a silver goblet and \$25 in cash for the introduction of the first **goats** (called Cashmeres at the time) into California.

1861.—Atwood **Merino sheep** introduced into Ohio by Mr. Minortone, of Lewis Center.

1862.—Mr. Abram Fultz, of Pennsylvania, found some beautiful heads of **smooth wheat** in his field and originated a new variety which is known by his name.

1862.—On April 8th of this year I. Winlow, of Philadelphia, obtained a patent for a new method of **preserving green corn** which he assigned to J. W. Jones, of Portland, Me. This was the French process invented by Nicholas Appert, in 1795.

1862. May 15th.—President Lincoln approved the bill establishing a **Department of Agriculture**, the Department being organized on July 1st of the same year. Hon. Isaac Newton, of Pennsylvania, was the first Commissioner.

1862.—In England, attention first drawn to the probabilities and possibilities of **wheat breeding**.

1862.—Lowest **wheat**, in January, 64 cents; highest, in August, 92½ cents.

1862.—First volume of **Polled Herd Book**, compiled by Mr. Edward Ravenscroft, of Edinburgh, Scotland, contained pedigrees of Galloway and Aberdeen-Angus cattle.

1862.—Norfolk and Suffolk Red Polled cattle formally recognized in classes at the International Show, Battersea Park, London.

1862.—Royal Agricultural Society of England, introduced special classes for **Galloway cattle** at International Show at Battersea, near London.

1862.—Gail Borden, of Texas, patented a process by means of which the juice of fruit, such as apples, currants and grapes, could be reduced to one-seventh of its original bulk.

1862.—The Massachusetts State Board of Agriculture held the **first Farmers' Institute**.

1862.—In this year C. Aultman & Co., of Canton, Ohio, made 3,100 "**Buckeye**" mowing and reaping machines.

1862.—The **Free Homestead Law** as we understand it to-day was enacted this year and approved by President Lincoln.

1862. March 5th.—Formation of the **Kansas State Agricultural Society** at Topeka. Officers: President, Lyman Scott, of Leavenworth; Secretary, F. G. Adams, of Shawnee; Treasurer, Isaac Garrison, of Shawnee.

1862. July 2d.—Passage of an act by the United States, apportioning lands for the establishment of **State Agricultural Colleges**.

1863.—A. W. Hall, of St. Louis, Mo., took out a patent for a **steam plow**.

1863.—New York **Central Stock Yards** at Buffalo, N. Y., opened this year.

1863.—In this year, at the International Exhibition at Hamburg, Germany, where all the finest flocks of Europe were represented, two first-class prizes were awarded to **Merino sheep** from Vermont.

1863.—In this year Barbour Bros. established the first factory for **making harness threads** in this country. Previously all this product was imported from Ireland.

1863.—George M. Patchen, **trotting under saddle**, made the record of two miles in 4:56.

1863.—January.—Isaac Newton, United States Commissioner of Agriculture, commenced analysis of wines, soils and grapes with a view to assisting the culture of the vine.

1863.—Lowest wheat, in August, 80 cents; highest, in December, \$1.12½.

1863.—First 160-acre United States homestead filed on by D. Freeman, five minutes after noon, near Beatrice, Neb.

1863.—In this year the **Grand Prix de Paris** was instituted, the horse **Ranger** being the first winner.



PRIDE OF AVON—AYRSHIRE BULL. Champion at Detroit, 1911; champion and grand champion Grand Rapids, Mich.; also champion at Arizona Fair, Phoenix, 1910 and 1911. Exhibited by W. A. Macdonald, Mesa, Arizona.

1863.—Ayrshire cattle breeders in America organized and begun the publication of a new herd book.

1863. February.—List of agricultural papers in the United States published by Norman J. Colman in his *Valley Farmer* of this date: Rural New Yorker, Maine Farmer, New England Farmer, Boston Cultivator, Massachusetts Plowman, Hovey's Magazine of Horticulture, American Agriculturist, Working Farmer, Horticulturist, Farmer and Gardener, The Gardeners' Monthly, Country Gentleman, Genesee Farmer, Ohio Farmer, Michigan Farmer, Prairie Farmer, Illinois Farmer, Wisconsin Farmer, Iowa Homestead, California Farmer and Canadian Agriculturist.

1863.—The **American Devon Herd Book**, the first volume of a new series, published in this year.

1864.—About this time, in Warren county, Mississippi, **Peeler cotton**, the first long-staple upland variety, was introduced, by whom not known. The most widely-grown of long-taped cotton in Mississippi and Louisiana.

1864.—Smallest crop of cotton grown any time in the United States after it became a crop. The crop of 1864-5 was about 250,000 bales. The Civil War was responsible for the shortage.

1864.—Highest wheat, in June, \$2.26 per bushel; lowest, in March, \$1.07.

1864.—High war prices of cotton: Highest price of the year, \$1.90 per pound; lowest, 72 cents. This for upland middling on the New York market.

1864.—Year of the birth of the "cigarette" made from Perique tobacco of Louisiana and the bright yellow types of North Carolina and Virginia.

1864.—White Burley tobacco originated in Brown county, Ohio, from a sprout of the red Burley. Well adapted to plug fillers and plug and twist wrappers.

1865.—Extract of meat, invention by Liebig.

1865.—About this time vegetable growing under glass began to attract wide-spread attention.

1865. February.—Act passed in Kansas to prevent Texas stock being driven into the state on account of Southern fever.

1865.—Beginning of the spread of the peanut industry. Soldiers campaigning in Eastern Virginia acquired knowledge of the plants and carried the seed over the South.

1865. February 13th.—Special charter granted by the Legislature of Illinois to the **Union Stock Yard and Transit Company** of Chicago, Ill. Incorporators: John L. Hancock, Virgilius A. Turpin, Roselle M. Hough, Sidney A. Kent, Charles M. Culbertson, Lyman Blair, Martin L. Sykes, Jr., George W. Cass, James F. Joy, John F. Tracy, Timothy B. Blackstone, John H. Moore, John S. Barry, Homer E. Sargent, Burton C. Cook, John B. Drake, William D. Judson, David Kreigh, Joseph Sherwin and John B. Sherman.

1865. April 14th.—Andrew Johnson elected Vice-President, succeeds to the **Presidency of the United States**, and serves nearly four years.

1865.—National Wool Growers' Association organized.

1865.—Captain McGowan, a roan horse of unknown breeding, established the **twenty-mile trotting record** of 58:25.

1865.—L. B. Silver, of Cleveland, Ohio, bought the foundation of his **Ohio Improved Chester hogs** and commenced to build a strain or family according to his idea.

1865.—Auction of **Shorthorn Grand Duchess cattle** by catalogue at Willis' Rooms, London, no animals being in sight. Thirteen cattle averaged \$2,177.28 per head.

1865.—The **rinderpest**, originating in Russia, reached London by importation of foreign cattle.

1865.—Dexter, by Hambletonian, 10th, dam by American Star, trotted two miles to wagon in a race in 4:56¼.

1865.—Lowest wheat, in December, 85 cents; highest, in January, \$1.55.

1865. December 25th.—**Union Stock Yards**, Chicago, Ill., thrown open for business.

1865.—"Gardening For Profit," by Peter Henderson, issued in this year—the first important work devoted exclusively to market gardening.

1865.—In this year the **Turf, Field and Farm** was founded by S. D. Bruce, B. G. Bruce and Hamilton Busbey.

1865.—The territorial government of Montana passed an act concerning **marks and brands** at the request of cattle raisers then engaged in the business.

1865.—J. M. Daugherty, famous driver of trail herds, engaged as cowboy for James Adams at San Antonio, Texas. He afterwards delivered 40,000 Texas cattle in one year at government Indian agencies in the Northwest.

1865. July.—Birth of noted sow mentioned as being one of the best of the early **Poland Chinas**—"Lady Pugh, white; one of the best sows in Warren county, Ohio. Farrowed in July, 1865. Bred by J. B. Pugh, of Franklin, Warren county, Ohio, in the fall of 1868; owned by him until she died, August 29th, 1876. Sired by Young Bob, 300; dam, the old Harkrader sow."

1865.—In this year the **total recorded live stock receipts** at St. Louis amounted to 94,370 cattle, 99,663 hogs and 52,133 sheep.

1865.—About this time **Paris green** was first applied for the destruction of the potato bug and other leaf-destroying insects.

1866.—In this year a **Colorado Cattle Growers' Association** was partly organized; was completed in November of the year following with John Lilly, President; and J. S. Wheeler, Secretary. It was the year 1875 before Colorado had an important cattle-growing interest.

1866.—First **Belgian draft horse importation** to this country by Dr. A. G. Van Hoorebeke, of Monmouth, Ill. Horses were called Bouonnais.

1866.—Henry L. DeVilmorin, a French plant breeder, found that 1,000 to 1,300 feet apart was sufficient to prevent spontaneous intercrossing by wind-blown pollen. He was experimenting with Indian corn.

1866.—**Ancona fowls** first brought to public notice in the United States by the late Francis A. Mortimer.

1866.—**Practical Floriculture** by Peter Henderson appeared this year; first important volume on the subject.

1866, January.—Mr. Luther Tucker, of Albany, N. Y., publishing two farm papers, *The Cultivator*, by consolidation with *The Genesee Farmer*, dating back to 1831, and *The Country Gentleman*, founded in 1840, combined the papers under the name of *The Cultivator and Country Gentleman*, the title being abbreviated to "*The Country Gentleman*" in 1898.

1866.—The fastest mile record trotting under saddle up to this period was made by Dexter, the great son of Hambletonian, 10th, the time being 2:18.

1866.—In this year 262,000 head of **Texas cattle** were driven across the Red river into the Indian Territory and started for Sedalla, Mo., then the western terminus of the Missouri Pacific Railway; but local organizations of settlers barred the way and the drive ended in disaster and ruin to the drovers.

1866.—After-the-**war cotton prices**: Up-and-middling, highest of the year at New York, 52 cents per pound; lowest, 32 cents.

1866.—In this year Charles Goodnight, famous Texas ranchman, together with Oliver Loving, a native Texan, drove a herd of cattle from Southern Texas up the Pecos river valley to Fort Sumner in order to fill a government contract. At this period the trail was not established and no cattle were ranging between Horsehead Crossing and Fort Sumner. In one of these trips Oliver Loving was killed by Indians.

1866.—J. O. Sheldon, of Geneva, N. Y., bought all the available pure **Duchess Shorthorns** in America.

1866.—Dr. J. Stayman, of Leavenworth, Kas., grew a lot of apple seedlings, the seed being selected from a choice lot of **Winesap apples** grown in the county. He originated what is now known as the Sayman Winesap apple.



IDA OF ST. LAMBERT—Jersey cow.

1866.—The **Island Herd Book of Jersey Cattle** was started in this year. The first examination for qualification was held on the 4th of April. Forty-two bulls were registered as foundation stock. Later 182 cows were examined and approved, and by the end of 1868 altogether 92 bulls and 381 cows and heifers had been examined. All these were qualified as foundation cows. Col. Le Conu was the Honorary Secretary and Treasurer.

1866.—"Prince of Wales" foaled; most prominent **Clydesdale sire**, bred by James Nicol Fleming, of Ayrshire, Scotland; was sold at five years old for \$7,500; sire of Albion, 3,000-guinea colt.

1866.—**Lowest wheat**, in February, 77 cents; highest, \$2.03.

1867.—The first United States patent for a **disc plow** granted to M. A. & I. M. Cravath, of Bloomington, Ill.

1867.—Bailey's **Annals of Horticulture** says that in this year the experiment of **shipping green fruit** by express from California was tried with no very flattering results, as the excessive express rates, in

connection with the fact that the fruit did not arrive in very good condition, made the experiment a losing one on the part of the shippers.

1867.—The **Willett peach** originated about this time from a peach stone brought by Cornelius O'Brien, of Bryant's Minstrels, from South America, and by him sown in his garden at 110 West Fortieth street, New York City. The property came into possession of Mr. Wallace P. Willett when the tree was in full bearing. Twelve selected specimens of the fruit of the original tree weighed twelve ounces each and measured twelve inches in circumference. It is described in the Department of Agriculture Year Book, 1902.

1867.—Mr. Andrew Albright, of New Jersey, patented a process for the introduction of **hard rubber covered harness trimmings**, a purely American invention, which has figured conspicuously as a mounting for fine harness.

1867.—Gerritt S. and Dudley Miller, of New York, imported **Holstein-Friesian cattle** from the best herds in Holland.

1867.—First selection of **Griffin cotton** produced by John Griffin, Refuge Plantation, Greenville, Miss. One of the best long-staple upland cottons.

1867.—At the Paris Exposition, a **Poitou jack** sold for \$3,200, to go to South America.

1867.—The **English Derby** was won by Hermit, a horse owned by Mr. H. Chaplin. There were thirty starters, and the time was 2:52. A horse called Marksman was second.

1867.—A **pear tree** planted by Governor Peter Stuyvesant at the corner of Thirteenth street and Third avenue, New York, was destroyed in this year, after having attained to more than 200 years of age.

1867, July 30th.—Dexter, the first great son of Hambletonian, 10th, dam Clara, by American Star, made his **famous trotting record** of 2:19 at Riverside Park, Boston, Mass. The track was a half-mile one, and he was driven by the celebrated Budd Doble.

1867, November 26th.—First patent for **refrigerator car** taken out by J. B. Sutherland, of Detroit, Mich.

1867.—**American Shorthorn cattle** sold at the Queen's farm, Windsor, consigned by Mr. Sheldon, of New York. Nine cattle sold at an average of \$2,615.50 per head. These cattle were sold by candle light.

1867.—C. W. Cheney, of Massachusetts, imported **Angora goats**.

1867.—S. T. Todd, son of the originator of the Todd hog, began crossing with pure Chester Whites; origin of the **O. I. C. Improved Hog**.

1867.—Mr. Israel S. Diehl, commissioned by the United States Agricultural Department, visited the Province of Angora to investigate the **mohair industry**.

1867.—In this year a cattle trail was established, extending 1,200 miles from Corpus Christi, Texas, to Abilene, Kansas, mainly through the exertions of James G. McCoy. This trail lasted without change for four years, and the northern terminus was afterwards changed several times, notably to Wichita and Dodge City. In twenty years 9,999,970 head of cattle passed over the trail, which finally extended by way of Ogallala, Nebraska, to the British possessions.

1867.—A. C. Franklin and Major Tul Craig, of Sumner county, Tennessee, made a large importation of **Catalonian Jacks**, first importation after the war.

1867, August 14th.—The famous Dexter reduces the **mile trotting record** to 2:17½ at Buffalo, N. Y.

1867.—First of many **Shorthorn cattle importations** by Hon. M. H. Cochrane, of Hillhurst, Quebec, Canada.

1867.—**Brahmin cattle** introduced into Mexico. F. McManus & Sons shipped twenty head (from the Davis importation) to a farm near the City of Mexico.

1867.—**Lowest wheat**, in August, \$1.55; highest, \$2.35, in May.

1868.—Mr. James Duncan, sugar refiner, of Mining Lane, London, erected first **beet-sugar factory** in England at Lavenham, in Suffolk.

1868.—Mr. Parker Earle, of Cobden, Ill., successfully **transported strawberries** to Chicago, New York and New Orleans in refrigerator cars.

1868.—John H. Potts & Son, of Jacksonville, Ill., commenced breeding **Shorthorn cattle** which developed into a great show herd.

1868.—**Beef cattle** were driven out of Montana Territory by D. Hogan, of Augusta, in the interest of a firm named Orenstein & Popper, of Salt Lake City, and bought from a range cattle owner named P. Largey.

1868.—The first **Percheron horse importation** west of the Wabash made by W. J. Edwards, of Chicago. He imported two great stallions called Success and French Emperor.

1868.—The **seedless apple** reported to the New York Farmers' Club as having been found in West Virginia.

1868.—Longfellow, a chestnut gelding by Red Bill, **paced three miles** to wagon in a race in 7.53.

1868.—**Lowest wheat**, in November, \$1.04 1/2; highest, in July, \$2.20.

1868.—On the 11th of July, 1868, Major Wm. Noble Davis, of Kendall county, Illinois, bought 181 head of **Texas cattle** at the Chicago Union Stock Yards as feeders for \$20 per head. He paid \$550 damages for introducing Texas fever to the cattle of Laureston Walker, who was one of his neighbors.

1868.—In the spring of this year, A. C. and W. L. Cassidy, together with D. Sam Irons and John T. Berry, formed a partnership in the **live stock commission business** at the Broadway Stock Yards, St. Louis, Mo. Others engaging in the business about the same time were J. L. & R. F. McCormack, Buchanan & Hurley and Tom Gregory. All were pioneers in the live stock commission business.

1868.—Sir J. Hawley's Blue Gown, sired by Beadman, won the **English Derby** in the remarkably fast time for that period of 2:43 1/2. Eighteen horses started, King Alfred being the second.

1868.—The first person who engaged in **packing pork** at Kansas City was Thomas J. Bigger, in the fall of 1868. Mr. Bigger engaged exclusively in preparing meats for shipment to Belfast, Ireland.

1868.—The twelfth census of the United States says that the most important step in the development of American beef as an article of commerce was the invention of the **refrigerator car** by William Davis, of Detroit. The patents were issued in 1868, and in September, 1869, the first cargo of fresh beef was shipped from Chicago to Boston. This was the commencement of a great industry in the United States and the initial step toward the foreign trade. The cars now used by the great meat packers of the West are founded on the Davis patent of 1868.

1868.—The Chicago house of Armour & Co. began **packing hogs** in 1868. The beef packing was of later origin. Armour, Plankinton & Co. had previously organized in 1863 at Milwaukee. In 1870 they absorbed a large portion of the pork-packing interests of Chicago. The Kansas City house was established in 1871.

1868.—Annals of Horticulture by Bailey says that in the month of November, 1868, N. B. Doe, at that time located on Vesey Pier, New York, received one car of **California grapes and three cars of pears**. The grapes consisted of several varieties, but mostly Tokays, and arrived in good condition, selling from \$10 to \$15 per crate of forty pounds net. These grapes came through by passenger train in a ventilated car, with freight charges of \$1,200. The pears were winter Nells and Easter Buerre and arrived in very good condition. They realized from \$2.50 to \$5.00 per box. The pears came by freight train in ventilated cars and were in transit twenty days, freight on same being \$600 per car. The result of the shipment afforded sufficient

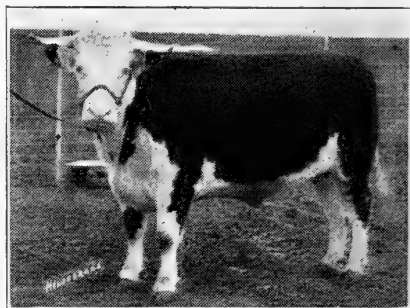
encouragement for shippers to continue with increased consignments.

1868.—In the year 1868 Mr. P. Hutchinson bought ground adjoining the Union Stock Yards, Chicago, and immediately proceeded to build a **large packing house** upon it. This is the leading item in connection with the concentration of packing houses in the vicinity of the stock yards.

1868.—The perpetual **flowering carnations** first imported into America, and growing them under glass was commenced.

1868.—D. Hogan drove a herd of **beef cattle** from Montana for the purpose of filling contracts along the Union Pacific Railroad. The contractors were Orenstein & Popper, of Salt Lake City, and the cattle were purchased by P. Largey.

1868.—**Cheesemaking** reported as being an important industry at Centralia, Nemaha county Kansas.



CLIFTON — CHAMPION HEREFORD STEER AT THE CHICAGO INTERNATIONAL LIVE STOCK EXPOSITION, 1911. Exhibited by J. P. Cudahy, Kansas City, Mo.

1868.—In this year a four-year-old Hereford ox was winner of the gold medal as the **best ox or steer of any breed**. This at the show of the Smithfield Club in London.

1869.—The **English Derby** was won by Pretender, a horse owned by Mr. J. Johnstone. The time was 2:52 1/2, and Pero Gomez was second.

1869.—Experiments of E. A. Carriere with the wild radish form a classical example of **plant breeding**. In five years by means of cultivation and selection alone he produced from a troublesome weed practically all the type forms of radish in cultivation.

1869.—In this year only four varieties of **sweet corn** were to be found in the seed catalogues.

1869.—Longfellow made the **record for four miles** paced in harness in a race, the time being 10:34 1/2. Longfellow was sired by Red Bill, but his dam is unknown.

1869.—Dr. P. Nobbe, in Tharand, Saxony, began **testing seeds**, and was the beginning of extensive seed central work in Europe.

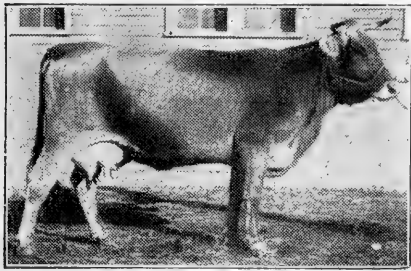
1869.—The **fastest record for four miles** trotted in harness in a race was made by Lady Dooley, a brown mare by Black Hawk. The time for the distance was 11:05.

1869.—Ulysses S. Grant elected **President** of the United States, and served eight years.

1869.—A native of Angora, in Asia Minor, A. Eutyichides, brought 175 **Angora goats** to this country.

1869.—A writer in the Agricultural Journal of the Cape of Good Hope says: "A feature worthy of note is that Bredasdorp opened the new **industry of ostrich farming**, as in the spring of 1869 the first lot of chicks were domesticated with remarkable success on the farm of Zoetendal's Vallee, where the wild ostrich was to be seen stalking the downs in large flocks. It was of these birds, twenty-one in all, of which one by the Duke of Edinburgh's party shot one by mistake near the yard, taking them for wild birds, after the Duke had bagged a fine wild cock not far off."

1869.—Downing's "Fruits and Fruit Trees of America," published this year, mentions more than 136 varieties of peaches in this country, also 970 varieties of pears.



McALPINE—Champion Brown Swiss cow at the Illinois State Fair, 1906. Owned and exhibited by E. M. Barton, of Hinsdale, Ill.

1869.—In the autumn of this year one bull and seven heifers received in Massachusetts of the **Brown Swiss herd** represent the earliest American arrivals of these cattle.

1869.—The first **commercial orchard** in the Southwest planted five miles west of Springfield, Mo., by Hon. Ira S. Haseltine. It consisted then of ninety acres, and increased until 2,000 acres or more of apple orchards were planted by this family.

1869.—The disease first called dikkop, later known as **wire worm**, developed to an alarming extent amongst sheep and goats in South Africa, killing eighty to ninety per cent. of lambs and kids.

1869.—A count of **cheese factories** showed 1,000 or more to be operated in the United States.

1869.—James T. Worthington published a "Manual of **Fig Culture** in the Northern and Middle States. It was issued at Chillicothe, Ohio.

1869.—On December 15th the **Kansas City Pomological Society** was incorporated, the first President being William Tanner, of Leavenworth. This was changed later to the **Kansas State Horticultural Society**.

1869, May.—Mr. J. H. Sanders began the publication of the monthly **Western Stock Journal**, issued at Sigourney, Iowa, afterwards consolidated with the **National Live Stock Journal**.

1869.—Diehl & Brown, of Ohio, imported 135 **Angora goats**.

1869.—Extensive **markets and abattoirs** of La Vilette, concentrating the seven live stock markets near Paris, France, were opened in this year.

1869.—London Smithfield Club **beef cattle champions** for previous thirty-three years were as follows: Shorthorns, fourteen times; Aberdeen-Angus, nine; Crosses, four; Devons, three; and Herefords, three.

1869.—**Highest wheat**, in August, \$1.46; lowest, in December, 76½ cents.

1869, September.—A successful shipment of **dressed beef to Boston** in a refrigerator car made by D. W. Davis of Detroit, Mich.; said to be the beginning of the dressed-beef industry.

1870.—In this year was the first recorded export of **cotton-seed oil**, amounting to \$14,946 in value. This increased to \$2,514,300 in 1878.

1870.—The Superintendent of the **United States Census** of this year mentions corn selling at 90 cents a bushel in New England, and being burned for fuel in Iowa; wheat selling at \$1.35 per bushel in New York and 45 cents in Minnesota; beef bringing \$7.00 per hundred on the hoof in the East and at the same time cattle being slaughtered for their hides in Texas.

1870.—In this year a large cargo of **live cattle** was exported from a Southern Texas port to Glasgow, Scotland, and only 15 per cent. arrived. These shipments became more regular afterwards, but the shipping ex-

penses were advanced to \$48.66 per head and the trade was closed on that account.

1870.—Mr. Emerson, of Mountain View, Santa Clara county, introduced pure-bred **Holstein cattle** into the state of California.

1870.—Lord Palmouth won the **English Derby** with Kingcraft, by King Tom, in 1845. Palmerton was second in a field of fifteen starters.

1870.—In this year **oleomargarine** was invented by a Frenchman named Megemouris.

1870.—The first **Japanese plum** to grow in this country, the Kelsey, was introduced in this year.

1870.—John Reber, of Lancaster, Ohio, began the work of importing **Clydesdale horses** into the United States.

1870.—United States Census reported 2,659,985 **farms in the United States**, an increase of 615,908 farms in ten years.

1870.—George Waring, farmer and sanitary engineer, introduced the **Trophy tomato**, the result of twenty-three years' careful selection.

1870.—Clark & Green, of Jefferson county, New York, made an exhibit of **Cheshire swine** at the St. Louis Fair, and won \$500 offered by pork packers for the best herd for packers' use.

1870.—**Belgian draft horses** imported by Massion & Son, of Minonk, Ill.

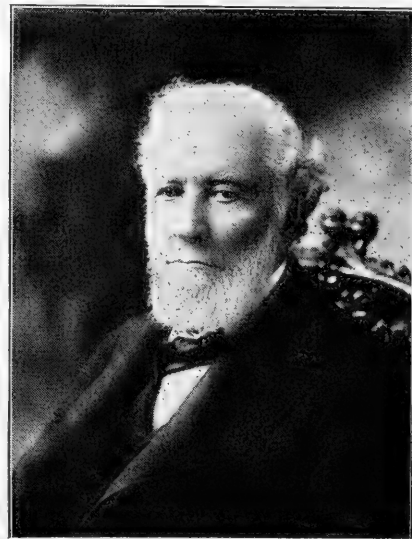
1870.—**Brown Swiss cattle** first imported by H. M. Clarke, of Belmont, Mass.

1870.—More than 80 per cent. of the **sheep in the United States** were of Merino blood.

1870, June 8th.—Daniel McMillan sale of **Shorthorns** at Xenia, Ohio. Seventy-four cattle averaged \$864.60 per head.

1870.—First large **prune orchard** planted at San Jose, Calif.

1870.—William Deering, of the state of Maine, arrived in Chicago, and with J. D. Easter as partner established the great **agricultural implement factory** which now bears his name, manufacturing the Marsh Harvester and the Whittington Wire Binder.



MR. WILLIAM DEERING, one of the founders of the farm-machine industry and for many years a great manufacturer. Born April, 1826, at South Paris, Maine; died December, 1913.

1870.—One of the greatest **show yard contest** in history—Shorthorns at the St. Louis Fair. Colonel Wm. S. King, of Minneapolis, Minn., winner of the herd prize, defeating Illinois, Missouri and Kentucky.

1870.—The census of this year shows the **sweet potato** crop of the United States to be 21,709,824 bushels—Vermont producing only 96 bushels.

1870.—**Center of the number of farms** in the United States, thirty-one miles east-northeast of Cincinnati, in Brown county, Ohio.

1870.—Introduction of "new process" of reducing **wheat to flour** at Minneapolis, Minn. Large influence in opening up spring-wheat section of the Northwestern States to settlement.

1870.—The Union Colony settled at Greeley, Colo., began irrigating.

1870. November 1st.—First systematic **weather bulletin** issued by the United States Signal Service. Twenty-four stations reported.

1870.—Gen. Charles P. Stone, an American serving in the army of the Khedive of Egypt, sent shoots of the **Date Palm** to Southern California.

1870.—In this year Nutwood, 2:18¾, was foaled at Woodburn Farm, Ky. He was a noted **sire of standard speed** and greatly distinguished as a brood mare sire. By January, 1906, his daughters had produced 268 performers with records in standard time, of which number 200 were trotters. No other stallion has nearly so good a record.

1870. **Center of United States population**, forty-eight miles east of north of Cincinnati, Ohio.

1870. November 17th.—First **beet-sugar factory** in California opened on the farm of E. F. Dyer, of Alvarado, Alameda county, by the California Beet Sugar Company. The stockholders were: C. I. Hutchinson, Flint, Bixby & Co., T. G. Phelps, E. H. Dyer, E. R. Carpenter, E. F. Dyer, W. B. Carr, W. T. Garratt, E. G. Rollins, all of California, and A. D. Bonesteel, A. Otto and Ewald Klinean, of Wisconsin.

1870.—**Lowest wheat**, in April, 73¼ cents; highest, in July, \$1.31½.

1871.—Baron Rothschild's horse, Favorius, captured the **English Derby**, Albert Victor and King of the Forest running a dead heat for second place. Time, 2:50.

1871.—Great year of the **Texas cattle drives** to Kansas, Colorado, Nebraska, Wyoming and Montana. About 600,000 cattle went north on the various trails.

1871.—The National Live Stock Journal of January, 1871, contains a write-up from Dukes Farmer of the largest **emporium for live stock** but one in the United States. This emporium was owned by the New York Central and Hudson River Railroad at West Albany, N. Y. The yards were constructed to accommodate 8,000 cattle and 10,200 sheep. The pens for hogs contained 1,144,000 square feet. The article concludes by saying that 3,000 cattle are often sold, weighed, paid for and shipped within the space of three and one-half hours.

1871.—At the Weehawken (N. J.) Stock Yards, way back in the past, they charged forty cents **yardage on Texas cattle**. A newspaper called the Globe said in January, 1871: "Those cattle from Texas have wide-spreading horos and look lean and lank. It would be impossible to fatten such creatures or cut a tender steak from them." This item was discovered in an investigation of the cattle trade of the United States, and is an example of old-time conditions. Texas cattle were shipped all the way from the range country to Weehawken, N. J., and were shrunk of their fat in transit and eaten up by expenses. This accounts for the immense number of beef cattle that net their owners but \$10 per head on the home ranges.

1871.—**Lowest wheat**, in August, 92½ cents; highest, in February, April and September, \$1.32.

1871. December 28th.—Formal opening of the **foreign cattle market** at Deptford, near London, England, mainly for receipt of cattle from the continent of Europe.

1871.—Golden Eagle, one of the eight **rares of corn**, recognized by the Illinois Corn Breeders' Association, originated this year with H. B. Perry, of Toulon, Ill.

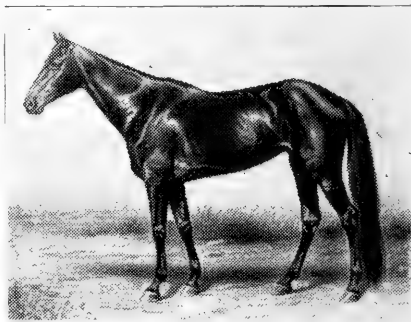
1871.—The **American Trotting Register** started by J. H. Wallace in New York.

1871. June 1st. —The first opening of the **Kansas City Stock Yards** as a live stock market. First President, James F. Joy; Superintendent, J. G. Smith; Secretary and Treasurer, Geo. N. Altman. Receipts for seven months of 1871 were 120,827 cattle, 41,036 hogs, 4,527 sheep and 809 horses and mules.

1871.—In April of this year the National Live Stock Journal of Chicago contained an item which commences by saying that Texas has 500,000 inhabitants and 2,000,000 head of cattle. It mentions the **rancho of Col. Richard King**, who owned 65,111 cattle, 10,000 horses, etc. The article concludes by saying: "A steer is worth about \$10 in Texas."

1871.—"Billy Atlanta," famous **Angora male**, killed by accident, at ten years old was sire of 2,000 kids, and was sweepstakes winner during his entire life. Owned by Wm. Landrum, of San Joaquin county, California.

1871. September.—**National Live Stock Journal** established at Chicago by John P. Reynolds and George P. Rust.



GOLDSMITH'S MAID.

1871. September 6th.—Goldsmith's Maid placed the **trotting record** at 2:17 at Milwaukee, Wis., driven by Budd Doble. She was sired by Abdallah, 15, her dam Ab, by Abdallah, 1.

1872.—In a book entitled "One Hundred Years of American Commerce," by Hon. Chauncey M. Depew, a chapter by Philip D. Armour mentions this year as the first of consequence in **summer pork packing**, there being 505,000 hogs packed in the summer season of that year.

1872.—In this year the first commercial organization of **packers of canned goods** met in convention in Philadelphia.

1872. June 9th.—In a race against time, Goldsmith's Maid reduced the **world's trotting record** to 2:16¾.

1872.—In November of this year the first north-bound shipments of **Texas beef cattle** were shipped from Denison to the Chicago market. The route was by the M., K. & T. Railway to Hannibal, thence to Chicago. The first shipment consisted of fifty-five cars, the principal shipper being Jerry Ellis, of San Antonio. Mr. John G. Taylor represented the railroad interest as live stock agent of the M., K. & T. and C., B. & Q. Systems.

1872.—From this year dates the **cattle-ranching period** in what is called the Pecos river country in Texas. John Chisum, a pioneer ranchman, and the only one distinguished by having a trail named after him, was the one cowman known to ranching on the Pecos at that time.

1872.—The National Swine Breeders' Convention mentions one family of **pigs, known as Victorias**, originated with Colonel Frank D. Curtis, of Kirby Homestead, Charlton, Saratoga county, N. Y., referred to as Curtis Victorias. Descended from a sow called Queen Victoria.

1872.—Olive oil first made in California at Santa Barbara.

1872.—Poland-China swine officially adopted by the National Swine Breeders' Convention.

1872.—For the second successive time a horse sired by Parnesse won the English Derby. This year it was Cremorne, the property of a Mr. Saville. The time was 2:45 1/2. Pell Mell came in second.

1872.—National Swine Breeders' Convention mentioned description of Neapolitan hog, a few being in this country.

1872, September 5th.—Earl Dunmore's cattle, forty-eight Shorthorns, sold at an average of \$1,250 per head.

1872.—National Swine Breeders' Convention mentions description of American Suffolk swine.

1872, November 17th.—Permanent National organization of American Shorthorn Breeders. First officials elected: President, Dr. A. C. Stevenson, of Greencastle, Ind.; Vice-Presidents, Wm. Warfield, of Lexington, Ky.; and Hon. David Christy, of Paris, Canada; Treasurer, John G. Dunn, of London, Ohio; Secretary, B. H. Campbell, of Batavia, Ill.

1872.—Elgin Board of Trade organized. Establishes weekly butter quotations in the Elgin district and has great influence in regulating the price of butter production in the United States.

1872.—Mr. P. M. LaPrice introduced a valuable greenish-yellow sugar cane into Louisiana from the Eastern hemisphere.

1872.—Lowest wheat, in November, \$1.01; highest, in August, \$1.61.

1873, January.—Daily Drovers' Journal founded at the Chicago Union Stock Yards by Harvey L. Goodall.

1873.—In this year Florida oranges began to arrive at the New York Produce Market, some of the earliest arrivals being consigned to Walter Carr & Co. For several years the price of these fine oranges was \$6.00 per box. In the beginning it is said that a large number of irresponsible dealers obtained consignments of oranges for which they made no returns. A book entitled "Annals of Horticulture" says: "It is undoubtedly true that the fruit growers were swindled right and left, so that it is no wonder they looked about for a remedy, and soon after the Florida Fruit Exchange (now the greatest fruit organization in the world) entered the field, and to-day stands at the head."

1873.—In this year a shipment of dressed beef was made from Denison, Texas, to New York City. The parties to the experiment were John G. Taylor, Live Stock Agent M. K. & T. Railway; John Bates & Bro., bankers, 52 Wall street, New York; George H. Rankin, owner of an ice machine at Denison, Texas; and Geo. H. Hammond, beef packer, of Hammond, Ind. Four loads of cattle bought by Mr. Taylor were slaughtered by a butcher named Quinn and placed in refrigerator cars, which were imperfect in construction. Although the train was delayed and behind a wreck at Parsons, Kas., and went to New York via Chicago, the meat arrived in good condition. Defective cars and poor icing communications interfered with later shipments, and the death of Mr. John Bates put an end to the experiment.

1873.—"In this year the railroad companies of the United States demanded payment in kind for the carriage of corn, and it appears exacted in some cases as much as two bushels for the transport of one." This statement was made in the Republic Francaise, a French paper, then reviewing American agriculture, and said: "Owing to the scarcity of live stock to fertilize the farms, the grangers of the Far West will soon exhaust the soil, and the exaggerated production of corn in the Far West will not last forever."

1873.—In this year the St. Louis Slaughtering and Rendering Company opened up for business. It was located opposite the Pacific Stock Yards, on the Manchester Road. Mr. Joseph Mulhall was President, and the capital stock was \$500,000. Before the days of cold storage and refrigeration

this was one of the greatest Western slaughtering plants.

1873.—In this year M. Goffart successfully kept maize as ensilage. He is generally credited with being the originator of the silo.

1873.—Mendel's collection of orchids, offered in the spring of this year, sold in England as high as £20, £40, and one plant £59 17s., the returns for the whole collection being 14,361.

1873.—Henry Evans, Jr., of Baltimore, fitted up a cannery for canning sweet corn, which afterwards was sold to Mr. E. E. Sears and successfully run to be the largest sugar corn factory in the East in the hands of his widow, Mrs. Sears.

1873.—On March 3d Congress passed an act to regulate the shipping of live stock, familiarly called the twenty-eight-hour law. It required all stock in transit to be unloaded, fed and watered every twenty-eight hours, unless transported in cars, boats or other vessels, where they could be properly fed, watered and rested.

1873.—Doncaster, owned by Mr. Merry, took the English Derby in a small field of twelve starters, the time being 2:50. Doncaster was sired by Stockwell. A dead heat for second place resulted between Gang Forward and Kaiser.

1873.—George Grant, of Victoria, Kas., imported three Aberdeen-Angus bulls.

1873.—First importation of Red Polled cattle into the United States by G. F. Taber, of Paterson, N. J.

1873.—Dr. Wm. McMurtrie, Chemist of the Department of Agriculture, commenced investigation to determine suitable locations for production of the sugar beet.

1873.—Aberdeen-Angus cattle imported from Scotland by Mr. Grant, of Victoria, Kansas.

1873, August 9th.—Hubbard, the great race horse, established the two and three-quarter mile record at 4:58 3/4, which stands to-day as the greatest performance of its kind. Hubbard was by Planet.

1873, September 10th.—Shorthorn cattle sale at New York Mills. 110 head sold for \$383,000, or an average of a trifle over \$3,482 per head.

1873, September 10th.—Seven-year-old Shorthorn bull Second Duke of Oneida, sold by Walcott & Campbell, of New York Mills, to T. J. Megibben for \$12,000.

1873, September 10th.—Seven-year-old Shorthorn cow, Eighth Duchess of Geneva, sold at New York Mills to R. Pavin Davis, of England, for \$10,000.

1873, September 10th.—Seven-year-old Shorthorn cow, Tenth Duchess of Geneva, sold at New York Mills by Walcott & Campbell to Earl Bective for \$35,000.

1873, September 10th.—Two-year-old Shorthorn cow, First Duchess of Oneida, sold at New York Mills by Walcott & Campbell to Lord Skelmersdale for \$30,600.

1873, September 17th.—At Sacramento, Calif., Occident establishes a world's trotting record in 2:16 3/4.

1873, November 19th.—The St. Louis National Stock Yards were officially opened as a live stock market, although some stock had been received and handled as early during the year as the latter part of June. The first officers were: A. M. Allerton, President and R. M. Moore, Secretary and Treasurer. The first Board of Directors was composed of A. M. Allerton, T. C. Eastman, John B. Dutcher, Alexander M. White, Andrew Pierce, Augustus Schell, Azariah Boodi, Oscar Townsend, John B. Bowman, E. W. Woodward and William R. McKean.

1873.—At the close of this year 397 places were enumerated as containing one or more pork-packing establishments.

1873.—A herd of fat beef cattle from the range of Montana, driven by a Mr. Forbes to Ogden, Utah, and shipped to Chicago. The cattle were ranged by Conrad Kohrs in the San River country.

1873.—Paris green first used as a spray for fruit trees about this time.

1873.—Lowest wheat, in September, 99 cents; highest, in July, \$1.46.

1874.—In this year the Wyoming Cattle Growers' Association was organized.

1874.—Mr. Cartwright's horse George Frederick captured the English Derby in the time of 2:46. George Frederick was sired by Marsyas. The winner of second was Couronne de Fer.

1874.—In February, the National Live Stock Journal reported pure-blood Shorthorn bulls sold to Texas cattle raisers whose names are mentioned here: Capt. E. R. Stiff, of McKinney, Collin county; Capt. Richard Carr, also of Collin county; Capt. A. H. Shoemaker, of Decatur, Wise county; Capt. Wm. A. Rhea, of Collin county; John D. Merchant and Elijah Emberson, of Denton county; Gilles Flippin, Samuel Skinner, Geo. Herndon and H. M. Porvin, all of Denton county; and D. C. Jordan, of Montague county. The importation was by W. R. Duncan, of McKinney, Texas.

1874.—M. W. Dunham established an importing and breeding farm for Percheron horses in DuPage county, Illinois.

1874.—First cotton-seed oil mill in Louisiana established at New Orleans.

1874, July 1st.—At a meeting held at Willis's Rooms, London, England, under the Presidency of the Duke of Devonshire, to consider the retirement of Mr. Henry Stafford as publisher of the Shorthorn Herd Book, a Shorthorn Society was formed, which, among other duties, undertook the maintaining and yearly issue of the Herd Book.

1874.—Mr. H. F. Euren, of Norfolk, established the English Red Polled Herd Book.

1874, July 15th.—Three-quarters of a second was taken off the world's trotting record, which had stood for two years, by Goldsmith's Maid at East Saginaw, Mich. This was in a race. The same year, against time, she further reduced it twice, the first time to 2:15½ at Buffalo, N. Y., August 7th, and later at Mystic Park, Boston, September 2d, to 2:14. Two full seconds were clipped off during this year, and all by the great daughter of Abdallah, 15.

1874.—Colonel Wm. S. King Shorthorns at Dexter Park, Chicago, May 21st. Seventy-nine animals sold for an average of \$1,628 per head.

1874.—Lowest wheat, in October, 81½ cents; highest, in April, \$1.28.

1874.—Herd Book of South Wales cattle issued. The "Castle Martins," or Black Cattle of South Wales.

1874.—The Buffalo cattle market received 504,594 cattle in 1874 and shipped out 468,521 of them. At that time Buffalo was the second largest live stock market, receiving 504,594 cattle, 1,431,800 hogs, 783,800 sheep and 21,936 horses. In 1866 Chicago passed Buffalo in cattle and hog receipts but not in sheep and horse receipts until much later.

1874.—First American Galloway Herd Book issued in Canada, bought in 1883 by American Galloway Breeders' Association and brought to the United States.

1874.—The Cultivator and Country Gentleman, issue of October 29th, said: "English papers mention the arrival at Liverpool of 270 head of cattle from America, by steamer, to be disposed of in the Liverpool market. The appearance of the cattle is spoken of as excellent. They weighed 1,830 to 2,000 pounds, and realized from seventeen to twenty-nine pounds in English money. They sold for \$82.25 to \$140.36 per head in American money."

1874, August 13th.—Mambrina Gift becomes the first 2:20 stallion by trotting the mile in that time at Rochester, N. Y.

1874.—English Christmas beef was mentioned in English papers of December, 1874, as being the highest in thirty years. The figures mentioned were from 14½ to 22½ cents per pound.

1874.—Alex No. 1, a Poland-China boar, and one of the earliest high-bred animals of the breed, sold by W. W. Greer, of Oxford, Ohio, to Klever Bros., of Bloomsburg, Ohio.



WALK OVER—POLAND-CHINA YEARLING BOAR. Champion Indiana State Fair, 1905. Exhibited by Pumphrey Bros., of Burney, Ind.

1874.—F. B. Redfield, of Batavia, N. Y., imported Aberdeen-Angus cattle.

1875.—The Butman, originated by Mr. Clarendon Putnam, of Maine, was the result of crossing the Hubbard squash with a Japanese race. It was the first American squash.

1875, February 25th.—American Berkshire Association organized at Springfield, Ill. First organization to systematically record pedigrees of this breed.

1875.—Prince Batthyany won the English Derby with the horse Gallopian, a son of Vedette, the time being 2:48. Claremont was second.

1875, August 25th.—Two-year-old Shorthorn bull, Duke of Connaught, sold at Dunmore, Scotland, by Earl Dunmore to Lord Fitzhardinge for \$26,904.

1875.—Bailey's Shorthorn Reporter issued from office of Mr. Allen, proprietor of the Shorthorn Herd Book.

1875.—Dispersion sale of Shorthorn herd of Wm. Torr, deceased, tenant farmer of Aylesbury, England. Mr. Torr once said: "It takes thirty years to make a herd and bring it to one's notion of perfection." His eighty-five animals sold for \$243,144.57, an average of \$2,860.52 per head.

1875, August 25th.—Earl Dunmore, of Stirling, Scotland, sold thirty-nine head of Shorthorns for \$3,289 per head, including a bull, the Duke of Connaught, for \$26,904. Highest prices were for cattle descended from American Shorthorns.

1875, October 14th.—B. B. Groom & Son, of Winchester, Ky., imported Bates-bred Shorthorn cattle and held sale of these and others. Seventy-three head averaged \$1,691 per head.

1875.—First regularly organized Experiment Station in the United States established by the state of Connecticut.

1875.—Lowest wheat, 83½ cents, in February; highest, in August, \$1.30½.

1875.—In the Cultivator and Country Gentleman of February, 1875, Hon. George Geddes, writing in regard to the cost of beef, said: "Within a mile of my own house lives a man who kills about fifty beef cattle every week. He buys them in Buffalo and brings them by rail to Syracuse, then drives them to his own farm, there slaughters them and sells their meat in Syracuse. Most of these cattle have long, wide horns and are called Cherokee cattle. They averaged in live weight from 1,000 to 1,100 pounds and kill remarkably well, having lost in their long journey much of the fluids that helped to make up their weight when they were raised." The average cost to the buyer was four cents per pound at Buffalo. He sold the beef at nine cents per pound, the hide and tallow at current prices. Speaking of the New York farmers, Mr. Geddes said: "Our farmers have found that to raise a steer to be three years old and more and sell his meat at nine or ten cents per pound is losing money, and they leave the production of beef for our own markets to Texas, the Cherokee Indians, or whoever may like to do that kind of business."

1875.—Southern-grown vegetables appearing in Northern markets began to have important effect about this time, causing Northern growers to use more forcing houses in competition with them.

1875.—First shipment of American fresh beef to England by Timothy C. Eastman, of New York, in October of this year.

1875.—Dr. Manley Miles built the first American silo for the storage of green fodder.

1875.—Professor Carl Linde invented the ammonia compression machine, the basis of successful modern refrigeration.

1875.—An era of specialization in flower growing assumed considerable importance at this time.

1875.—On January 20th of this year, John B. Sherman, Superintendent of the Chicago Union Stock Yards, offered the use of Dexter Park Pavilion, when not otherwise occupied, for the purpose of holding public sales of pure-bred stock. In order to prevent confusion in the matter of dates, such sales were to be under the management of Geo. W. Rust & Co., proprietors of the National Live Stock Journal, which was the leading live stock paper in the United States during that period.

1875.—In this year Mr. J. Moon, of Peytonville, Ark., selected seed from a single plant now called the Moon variety of long-staple upland cotton.

1875.—First American Agricultural Experiment Station begun by Wesleyan University, Middletown, Conn.

1875.—Preparing ensilage begun in this country, though the Roman writers show that the process is a very old one.

1875.—R. W. Wilson, of California, planted fifty acres in beets, onions, lettuce and carrots for seed purposes. First systematic development of the seed-growing industry on the Pacific Coast.

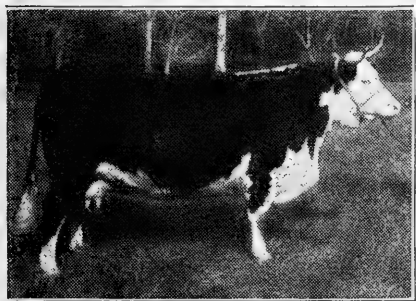
1875. April 11th.—Advance, Hereford bull, bred by T. L. Miller, first bull recorded in American Hereford Record. His sire, Success, 5,031, an imported bull, was recorded No. 2.

1875. April 14th.—Sale of Shorthorns first held at West Liberty, Iowa, by Mr. W. S. Jacobs. Eighty-three cattle averaged \$611.

1875. April 27th.—J. H. Pickrell sale of Shorthorn cattle. Twenty-three sold at an average of \$1,265 per head.

1875. July.—The famous Poland-China boar, Perfection, 447, bought by Oliver Paddock, of Indiana, from W. C. Hankinson, of Middletown, Ohio.

1875.—Dairy farmers began to skim their milk and sell only the cream to the creameries.



CHAMPION HEREFORD COW at the Live Stock Show, Buenos Ayres, South America, 1906. Exhibited by Senor Pariera. This picture was obtained by Mr. C. R. Thomas, Secretary of the American Hereford Association, during a visit to Argentina.

1875. August.—At New York Mills, Almon W. Griswold sold thirty-three Shorthorns for an average of \$1,697 per head.

1875.—First important agricultural and live stock show at Palermo, near Buenos Ayres, in South America, given under the auspices of the Rural Society.

1876.—In this year L. B. Harris, of Tom Green county, Texas, drove 75,000 cattle from Texas to Abilene, Kas., said to be the largest number driven by one outfit during the great days of the cattle trail. They were driven in different herds or bands.

1876.—Boone County White Corn, one of eight recognized varieties, originated with James Itley, of Thorntown, Ind.

1876. January 12th.—The Philadelphia Stock Yards Company started in business this date and went out of existence December 31st, 1896, succeeded by the West Philadelphia Stock Yards Company.

1876.—Kisber, a son of Buccaneer, won the English Derby, the principal contender being the horse Forerunner. The time, 2:44, was fairly fast. Kisber was owned by Mr. A. Baltazzi.

1876. August 26th.—Smuggler reduces the world's trotting stallion record for one mile to 2:15 1/4 at Hartford, Conn.

1876.—At a poultry exhibit at Bangor, Maine, six white fowls were exhibited, called Snow Flakes and Dirigos. They were afterwards admitted to the poultry standard as White Plymouth Rocks.

1876.—It was about the year 1876 when the cattle raiser obtained the benefits of the beef-canning business. The salt-beef trade had been very unsatisfactory for years. The immense number of inferior to fair grade cattle required some new outlet or would be practically unsalable. In this emergency George Brougham, an Australian, arrived in Chicago, bringing with him a practical knowledge of the beef-canning business, which had not been previously known or followed in Chicago. Mr. A. A. Libby, of the firm of Libby, McNeil & Libby, employed Brougham and placed a fine article of canned beef on the market, and by the year 1877 the firm had furnished a market for 100,000 cattle a year. The Fairbank Canning Company and Armour & Co. soon became large operators in the canned-beef trade.

1876.—The Agronomic Institute of Paris, the highest institution giving agricultural instruction in France, first opened to students.

1876. August 10th.—The eight-year-old Shorthorn bull, 14th Duke of Thorndale, sold at Paris, Ky., by George M. Bedford to Levi Goff.

1876.—Percheron-Norman Stud Book issued, afterwards called the Percheron Stud Book.

1876.—At the St. Louis Fair in this year Mr. Albert Rhodes, of Bridgeton, St. Louis county, Mo., had 125 varieties of apples on exhibition.

1876.—Herd of Shorthorns established at Linwood, Kas., by Colonel W. A. Harris.

1876.—Charles Goodnight and John G. Adair, pioneer cattle raisers in the Texas Panhandle, moved there from Colorado. Mr. Goodnight had previously ranged in Palo Pinto county, Texas.

1876.—National Norman Horse Association organized.

1876.—In the winter of this year the outfit of Causey & West, operating around Yellow House Canyon, killed and skinned 7,000 buffalo. This was the last grand stand of the immense herd, several million strong, that used to range between the Texas frontier settlements and the staked plains.

1876. September 16th.—Ten Broeck, the famous race horse, established the record for two and five-eighths miles at 4:58 1/2. This record was made at the old Lexington track.

1876.—In the fall of 1876 Mr. G. F. Swift shipped from Chicago to Boston two cars of refrigerated beef. The establishment of the great house of Swift & Company dates from this time. The two cars went forward on a train which was mostly made up of stock cars. Dressed beef had been shipped before, but this shipment was followed up immediately and developed into an immense trade.

1876.—John S. Harris, of California, later of Oakley, Idaho, imported Angora goats.

1876.—Beginning of **low prices for cotton**, upland middling on New York market, highest of the year, 18 $\frac{3}{4}$ cents per pound; lowest, 10 $\frac{1}{2}$ cents.

1876.—The **germ theory of disease** settled and accepted by veterinarians about this time.

1876.—The Journal of Commerce of New York, of December 30th, 1876, said that the **average price for the average grade of beeves** for the year was \$11.13 per 100 pounds dressed weight. The hide and tallow went to the butcher.

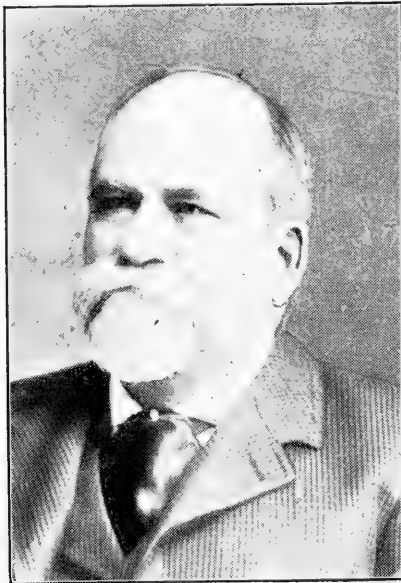
1876.—**Lowest wheat**, in July, 83 cents; highest, \$1.26 $\frac{1}{4}$, in December.

1877.—The first number of the **Farm and Fireside**, an important and meritorious illustrated farm and family journal, was issued in this month at Springfield, Ohio. P. P. Mast & Co. were proprietors; J. S. Crowell, Manager; and T. J. Kirkpatrick, Editor. The paper was started as a semi-monthly at 50 cents per year.

1877.—Rutherford B. Hayes, **President of the United States**, and served four years.

1877.—American Association of Importers and Breeders of **Belgian Draft Horses** organized. J. D. Connor, Jr., of Wabash, Secretary.

1877.—In this year Prof. E. H. Jenkins began **testing seeds** at the Connecticut Experiment Station.



JAMES C. LOVING, of Lost Valley, Jack county, Texas. In the organization of the Northwest Texas Cattle Raisers' Association, in the year 1877, the matter of suppressing cattle thieves on the range and the recovery of stolen cattle in market was placed in the hands of **JAMES C. LOVING**, Secretary, who held the office for many years. Under his management the association became the greatest live stock organization in the United States of America, first embracing the whole state of Texas and later including a membership from Oklahoma, New Mexico and Arizona.

1877, February.—The Northwest Texas **Cattle Raisers' Association** organized at Graham, in Young county, with C. L. Carter, President, and J. C. Loving, Secretary. This organization was afterwards enlarged to include the whole state, becoming the Texas Cattle Raisers' Association.

1877.—The Book on **Swine Husbandry** by Hon. F. D. Coburn, of Kansas, issued in this

year, had great influence in guiding and stimulating the production of hogs for market.

1877, May 29th.—The classic race horse Ten Broeck, a marvel of his time, went **two miles** over the Louisville track against time in 3:27 $\frac{1}{2}$. It was a most phenomenal performance for the period. Ten Broeck was by Imported Phaeton.

1877.—**Clydesdale Stud Book** of Scotland inaugurated.

1877.—**Galloway Society** established in Great Britain.

1877, November 9th and 10th.—First **Short-horn sale** at Kansas City held by T. Corwin Anderson, of Mount Sterling, Kentucky.

1877.—**Clydesdale Society** of America organized. First Stud Book issued in 1882.

1877.—Mr. LeDuc, Commissioner of Agriculture, introduced the "**Zevinga**," a Japanese variety of **sugar cane**, into the United States.

1877.—Great Eastern, bay gelding, by Wal-kill, dam Hamill mare, by Riley's Consternation, made the **mile trotting record** under saddle of 2:15, which record stands to-day, this fashion of racing having fallen into disuse.

1877.—**Lowest wheat**, in August, \$1.01 $\frac{1}{2}$; highest, in May, \$1.76 $\frac{1}{2}$.

1877.—In September of this year a herd of cattle was driven from Yankton, Dakota, to the Cheyenne River Agency, thirty-five miles above Fort Pierre, for the purpose of distributing them to the Indians to replace the ponies which had been captured from them in the campaign following the Custer massacre. The herd consisted of five bulls and 550 two-year-old heifers. The officer receiving and delivering the cattle under contract was Lieutenant F. W. Mansfield, Eleventh United States Infantry, and the herd was in charge of Mr. Philip H. Hale, editor of The History of Agriculture by Dates, who was then an employee of the United States Quartermaster's Department. This was the **beginning of domestic cattle raising on the part of the Indians of the Northwest**.

1877.—Lord Falmouth's Silvio won the **English Derby**, his principal contender being Glen Arthur, which finished second. Silvio was sired by Blair Athol. The time was 2:50.

1877.—The Champaign County Gazette of Illinois, of October, 1877, reports the sale of 700 head of **grass-fed steers** by Mr. B. F. Harris to Monroe & Son, of Albany, N. Y., of which the first 400 head shipped averaged 1,450 pounds, the others, equally as good, to follow. The report at the time was that Mr. Harris sold the steers at five cents per pound, live weight, delivered at the railway station.

1877.—In this year the Chicago Drovers' Journal mentioned that an enterprising canning firm had received an order from the Russian government for **every can of beef** they could put up in a year. "This was the beginning of the large orders which packers have occasionally obtained to clear away the inferior grades of cattle and which could not be bought for any other purpose."

1877, October.—Tom Corwin, 571, one of the early famous **Poland-China boars**, bought by W. O. Reveal, of Clermont, Ind., of James Duffield, of Somerville, Ohio.

1878.—The National Live Stock Journal mentioned a Champaign county (Illinois) farmer who in April, 1878, **bought a lot of 1,040-pound steers** for \$3.75 per 100 pounds as feeders and returned them to the Chicago market, December 10th of the same year, weighing 1,480 pounds. He sold them at \$4.12 $\frac{1}{2}$ per 100 pounds. This was before the dressed-beef houses were in the business.

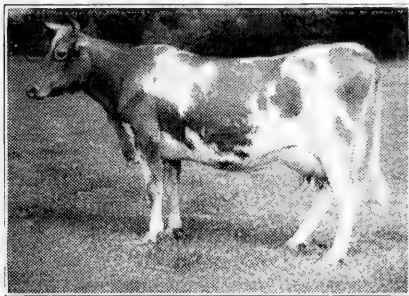
1878, August 3d.—After four years of reign as Queen of the Trotting Turf, Goldsmith's Maid was dethroned by Rarus, who, driven by John Splan, at Buffalo, N. Y., brought the **trotting record** to 2:13 $\frac{3}{4}$. He was a bay gelding by Conklin's Abdallah, his dam by Telegraph.

1878.—The Pictet Artificial Ice Company fitted up a building in Greenwich street, New York City, for the purpose of holding **fruits in cold storage** for the people.

1878, August 7th.—Sleepy George makes a world's record by **pacing a mile** in 2:15 at Rochester, N. Y.

1878.—**Galloway Society** of Scotland published first volume of pedigrees.

1878.—The **Ramamas rose** sent to America from Japan by Thomas Hogg about this time.



DOLLY BLOOM—Guernsey cow. One of the most famous of that great dairy breed.

1878.—**American Guernsey Cattle Club** organized in this year.

1878.—**English Shire Horse Society** formed and a stud book provided for.

1878.—**First American Fat Stock Show.** Champion beef animal, the Shorthorn steer John Sherman, exhibited by Colonel John D. Gillett, of Elkhart, Ind.

1878.—**Hog prices at Chicago, January 1st.** Heavy shipping hogs, \$2.75 to \$2.95 per 100 pounds; heavy packing, \$2.60 to \$2.70; light bacon grades, \$2.70 to \$2.75; skips and culls, \$1.50 to \$2.25 per 100 pounds.

1878.—**Young Perfection 631**, one of the best **Poland-China** boars of his day, sold by Joseph Morton, of Oxford, Ohio, to D. M. Magie, of the same place.

1878.—**Lowest wheat**, in October, 77 cents; highest, in April, \$1.14.

1878.—The record for a **ten-mile trotting race** was made by Controller, a son of General Taylor. The time was 27:23 3/4, and was the best, in a race, since 1853.

1878.—**Anderson & Findlay**, of Lake Forest, Ill., imported **Aberdeen-Angus cattle**.

1878.—**Mr. J. J. Gregory**, of Marblehead, Mass., an authority on the subject, estimated 7,000 acres as the total area devoted to **commercial seed growing**.

1878.—The **English Derby** was won by Mr. Crawford's horse Sefton, sired by Speculum. The time was slow, being 2:56. Insulaire ran a good second.

1879.—On the 31st day of October the business career of the **Matador Cattle Company** began, with headquarters at Teepee City, Motley county, Texas. Judge H. H. (Paint) Campbell was General Manager.

1879.—The **Shorthorn steer** Nichols, three years old, champion at American Fat Stock Show, exhibited by J. H. Graves.

1879.—**American Hereford Herd Book** founded at Beecher, Ill., by T. L. Miller.

1879.—Dark days of the **Shorthorn cattle** breeding and speculative interests. 2,865 Shorthorns sold at an average price of \$115 per head.

1879.—**Lowest wheat**, in January, 81 1/2 cents; highest, in December, \$1.33 1/2.

1879.—The **Allen Long Staple**, an **upland cotton** introduced by Mr. J. B. Allen, of Port Gibson, Miss. This caused a marked advance in the development of long-staple upland cotton. This variety came from a single stalk of Bohemian cotton, a Louisiana variety, origin unknown, and from this developed several other seed cotton varieties originated by Mr. Allen.

1879.—In February of this year, in the Cultivator and Country Gentleman, a reference was made to the Chicago Live Stock Reporter, which thinks that the driving of **Texas cattle up the trail** will soon cease. This opinion is based on the fact that a

large shipment of Texas cattle had been received at Chicago from S. R. Hilbourn, of Waxahachie, Texas, who had fed them there on Texas corn.

1879.—Sir Bevy's, a horse by Favorius, won the **English Derby** for Mr. Acton. The time was the slowest in the history of this great classic, being 3:02. The field consisted of twenty-three horses.

1879.—The **National Live Stock Journal** of Chicago, of June, 1879, writing on the price of beef cattle, said that a **good steer would sell for \$5.09 per 100 pounds** in Chicago, and that first-class steers would bring more. The item began by saying there was discouragement, depression, sometimes present loss in the production of a number of prominent farm products, but cattle were an exception.

1879.—From an annual review of the live stock trade of Chicago for 1879: "Early in the year the **export trade in live cattle** with Great Britain was brought to a sudden check by regulations which prohibited our shipments from entering their ports, except under such restrictions as practically ended all business in this direction, thus reducing the shipments of live cattle abroad to a minimum, but the increased exports of dressed and canned beef by the refrigerator system have fully made up the deficit."

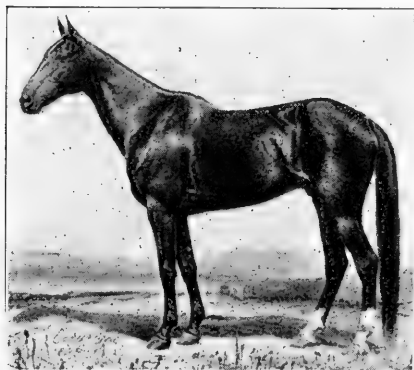
1879.—The date of the opening of the principal **beef-packing houses** is a very important item, because there begins the general stability of the beef trade. Nelson Morris & Co. commenced business in a portion of their present packing house at Chicago on June 7, 1879. The Fairbank Canning Company, which was under the same management and control as Nelson Morris & Co., started canning meats about two weeks later. Mr. Nelson Morris previously owned and conducted a slaughtering house on the Chicago lake front.



DR. CARL GUSTAF PATRICK DE LAVAL, of Stockholm, Sweden, inventor of the Centrifugal Cream Separator.

1879.—**Centrifugal cream separator** invented by Dr. Gustav De Laval, of Stockholm, Sweden. Great benefit to dairy interests, enabling the separation of cream from the milk while both are sweet and fresh from the cow.

1879.—St. Julien placed the **trotting record** at 2:12¾. The performance was made at Oakland, Calif., the horse being driven by Orrin Hickok. He was a bay gelding by Volunteer, dam by Henry Clay, 45.



ST. JULIEN, 2:11¾.—Schreiber photo.

1879, November 19th.—The **trotting standard** adopted.

1879, December 2d.—At Billerica, Mass., on "Willing Farm," owned by Mr. Jno. M. Bailey, the first **American silo** was opened in the presence of a distinguished gathering of agriculturists, officials and editors. The silo contained 120 tons of ensilage. The experiment was a success, and with the exception of two or three inches at the top, which was musty, the silage was good and readily eaten by stock.

1880.—J. B. Evans, an enterprising farmer in Cape Colony, South Africa, went to Angora, in Asia Minor, and obtained the finest specimens of the **Angora goat** which up to that time had reached the colony.

1880.—White Superior, a **standard variety of corn**, originated in this year by P. R. Sperry, of Monmouth, Ill.

1880.—Association of official **agricultural chemists** organized.

1880.—Special contest of **baling presses** for hay and straw at New York State Fair. First prize awarded to Whitman Agricultural Company, of St. Louis, Mo., the same firm winning four successive years.

1880.—**Brown Swiss cattle breeders** organized and commenced publication of a herd record.

1880.—Center of **population of the United States**, eight miles west by south of Cincinnati, Ohio.

1880.—Last class for **four-year-old beef steers** at American Fat Stock Shows.

1880.—The **Shorthorn steer** Nels Morris, weighing 3,125 pounds, exhibited by Mr. John E. Sherman at the Union Stock Yards.

1880.—Importation of **Gothland swine** from Sweden by Mr. S. V. Anderson.

1880.—First volume of the **English Stud Book** for Shire or Cart Horses published.

1880, April 29th.—**American Jersey Cattle Club** incorporated by Richard M. Hoe, Thomas H. Faile, Wm. E. Dinsmore, Erastus Corning, John D. Wing, Samuel J. Sharples, John Carter Brown, William S. Taylor, Joseph H. Reiman, John Hoey, Edwin Thorpe and Herbert M. Howe.

1880.—On June 25th of this year the German government issued an edict prohibiting the importation of "chopped or in a similar manner divided or prepared pork and of sausages of all kinds, from America."

1880.—The American Wonder, a **dwarf pea**, produced this year, was a combination of McLean's Little Gem and the champion of New England. It was a distinct step in the improvement of pea culture.

1880.—First **fencing** in the Panhandle of Texas on the ranch of Adair & Goodnight. The barbed wire cost nine cents a pound.

1880.—Mr. E. Moullee, of Jacksonville, Fla., started a **perfumery farm** at San Mateo, of that state, using orange and lemon fruits and flowers.

1880.—The United States Census reported 4,008,907 **farms in the United States**, an increase of 1,384,922 in ten years.

1880.—The **Elberta peach** (Chinese Cling) introduced into the Southern States.

1880.—Center of the **number of farms** in the United States, twenty-one miles south by east of Cincinnati, Ohio, in Kenton county, Kentucky.

1880.—The Duke of Westminster captured the **American Derby** with the great horse Ben d'Or, by Doncaster. Robert, the Devil, was second, and the time was 2 46.

1880.—Mr. Gullan P. Rixford, of the San Francisco (Calif.) Bulletin, imported cuttings of the best varieties of **Smyrna figs** from Smyrna, in Asia Minor. This importation was a failure, supposedly owing to bad faith on the part of the Smyrna fig growers who sold the cuttings.

1880, April.—George B. Loving commenced publication of **Texas Live Stock Journal** at Weatherford.



GEORGE B. LOVING, of Fort Worth, Texas, in publishing the **Texas Live Stock Journal**, the first ranchman's paper, invited the attention of the world to the ranch cattle industry and more especially to the cattle-raising interests of Texas. He was the son of a pioneer cattleman, Oliver Loving, who lost his life in defending his herd from Indians on the Chisum cattle trail.

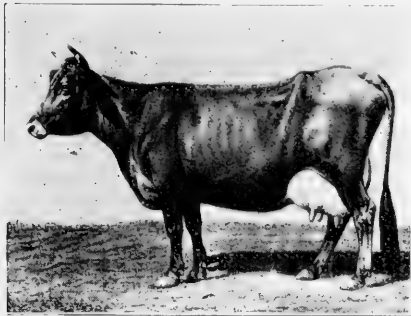
1880, August 12th.—Maud S. made her appearance as **trotting champion** at Rochester, N. Y., where, driven by W. W. Blair, she took a full second off the trotting record, going the mile in 2:11¾. She was a chestnut mare by Harold, dam Miss Russell, by Pilot, Jr., and in her six-year-old form. Fifteen days later St. Julien reduced the mark to 2:11¼ at Hartford, Conn. Before the year was out Maud S. again assumed the record by a mile at Chicago, Ill., in 2:10¾.

1880, September 16th.—**Goat Show** at Alexandra Palace, North London, supported by the British Goat Society.

1880.—During the week ending November 20th, the record for a week's receipts of hogs was made by Chicago, Ill. The total was 300,488 head.

1880.—During November, record **receipts of hogs** for a month were made at Chicago, Ill. The record is 1,111,997 head.

1880.—Lowest wheat, in August, 86½ cents; highest, in January, \$1.32.



MATILDA, 4th.—Famous Jersey cow. From photo by Schreiber.

1881.—In the January, 1881, issue the Kansas City Live Stock Indicator reported that J. C. Jones, of Colorado, had sold 30,000 cattle to Towers, Gudgell & Smart at \$17 per head, calves counted.

1881.—First improved stock car originated by Mr. A. C. Mathers.

1881, March 1st.—First recorded contrivance for mechanically pressing silage, patented by Levi H. Whitney, of Lowell, Mass.

1881, March 5th.—First number of the *Chicago Horseman* issued, with E. L. Stowe as editor.

1881.—The English Derby went to Pierre Lorillard's grand race horse Iroquois, by Leamington, with Peregrine second. Time, 2:50.

1881.—Apricot, or Simon Plum, native to China, introduced into this country.

1881.—James A. Garfield, President of the United States, and served until he died, September 19th, from wounds inflicted by the assassin.

1881.—Mechanical Refrigerating Company opened a commercial cold-storage plant in Boston, marking the beginning of mechanical refrigeration in regard to horticulture.

1881.—The first iron greenhouse in the United States erected this year.

1881, June 22d.—American Hereford Cattle Breeders' Association organized. C. M. Culbertson, President; T. E. Miller, Secretary.

1881, July 16th.—Swannano, an aged horse by Red Dick, established the mile record of 1:50 in a hurdle race at Brighton Beach, N. Y. He carried 120 pounds.

1881, July 19th.—Speculation, a running horse by Daniel Boone, ran a mile and a half over hurdles at the Brighton Beach Course, New York, in 2:47. The same time, under the same circumstances and at the same place, was made by Kitty Clark, by Glenelg, on August 23d, the same year.

1881, August 11th.—Trotting record reduced twice by Maud S., finally placed at 2:10¼ at Rochester, N. Y.

1881.—Turkey prohibited the exportation of Angora goats.

1881.—"The coming American cow will be of the Shorthorn type and hornless."—Hon. L. N. Bonham.

1881.—John D. Gillett's red Shorthorn bullock McMullen, champion of American Fat Stock Show, weighing 2,095 pounds.

1881.—Stud Book issued in France for the Nivernais (black) draft horses.

1881.—Little Brown Jug, brown gelding, by Gibson's Tom Hal, dam Lizzie by John Netherland, reduced the mile pacing record to 2:11¾. This at Hartford, Conn., August 24th.

1881.—Breeders' Gazette established at Chicago by Mr. J. H. Sanders.

1881.—Lowest wheat, in January, 95½ cents; highest, in October, \$1.43¼.

1882.—The sweet pea began to be placed in flower seed catalogues about this time.

1882.—In his American Orchardist, James Thatcher says: "The seeds for planting should always be selected from the most highly-cultivated fruit and the finest and ripest specimen of such variety."

1882, January.—A large hog was exhibited at Junction City, Kansas, said to weigh 1,532 pounds.

1882.—H. H. Haaf, of Chicago, formerly of Henry county, Illinois, began a series of articles in favor of dehorning cattle.

1882, February 22d.—Ohio Spanish Merino Sheep Breeders' Association organized at Columbus, Ohio. G. R. Quinn, President; H. C. Denyer, First Vice-President; B. W. Bell, Second Vice-President; Capt. J. G. Blue, Secretary; Wm. Kennedy, Treasurer.

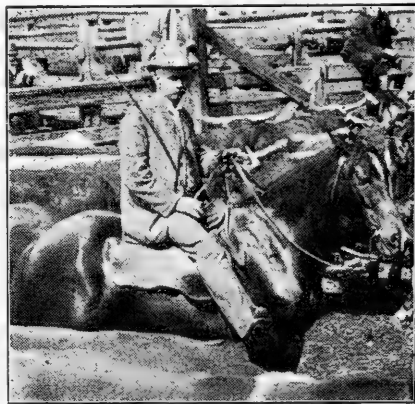
1882.—Brienzi, 168, a noted Brown Swiss cow, imported this year. She became the most noted cow of the breed in this country. At eleven years old she weighed 1,410 pounds. Her three-day show record was 81.7 pounds of milk per day, containing 3.11 pounds of butter-fat, equal to 3½ pounds of merchantable butter each day.

1882, February.—In this month the great eight-year-old white steer, Nels Morris, that had been exhibited at several Chicago Fat Stock Shows, was slaughtered. His gross weight was 2,880 pounds, and he dressed 2,076 pounds.

1882, March.—In this spring a feature of the live stock trade of Chicago was the arrival of large numbers of stock cattle from Western Pennsylvania. This indicated the local abandonment of cattle raising as a business and the weakness of the seaboard markets as regards anything except choice cattle and calves.

1882, April.—Sheep sold at the Chicago market at \$8.00 per 100 pounds, highest price on record.

1882.—"Davis' Victoria swine given a class at Illinois State Fair. Originated by George F. Davis, of Dyer, Ind. Combination of Poland-China, Chester White, Berkshire and American, or White Suffolk.



THE FIRST TRAIN OF GRASS TEXAS CATTLE to sell at seven cents per pound were sold by Hunter, Evans & Co. on the St. Louis market. The picture is that of MR. M. P. BUEL, of the firm of Hunter, Evans & Co.

1882, May.—A train of Texas cattle shipped by Colonel C. A. Slaughter, of Dallas, sold on the St. Louis market at seven cents per pound.

1882, June.—Native beef cattle sold at Chicago on the general market at \$9.30 per pounds.

1882, July 25th.—At Saratoga, N. Y., Ben d'Or, by Buckden, placed the record for a mile and five hundred yards at 2:10½.

1882, September.—Heavy hogs sold up to \$9.35 per 100 pounds at Chicago; highest price on record.

1882.—First **Ensilage Congress** held in New York City. It was resolved that the ensilage system is of great advantage to the farming interest and to all mankind.

1882.—John D. Gillett's **Shorthorn steer** second time victor at the American Fat Stock Show, having gained 470 pounds during the year. Show weight, 2,565 pounds.

1882. November 9th.—The mile and a quarter **race record over hurdles** was placed at 2:16 by Rourke Cochran, a horse by War Dance. This time was made at Brighton Beach, N. Y.

1882.—One of the early farm newspaper articles concerning the great packing houses appeared in the Country Gentleman, of Albany, N. Y., December 7th, 1882, as follows: "A single meat factory, so to speak, the noted establishment of Armour & Co., with its army of 3,000 employees, disposes of every day of 700 or 800 cattle, mostly Texans, and 5,000 to 12,000 hogs, every one of which is slain on the premises and worked up into all possible products, hardly an ounce of the whole vast bulk going entirely to waste. A visit to this establishment is of the utmost interest to those who care to see the wonderful results that can be accomplished by system, division of labor, co-operation and the employment of steam-driven machinery for the relief of human muscle."

1882.—Lowest wheat, in December, 91½ cents; highest, in April, \$1.40.

1882.—Shotover, owned by the Duke of Westminster, won the **English Derby** in 2:45 3-5, Quikline finishing second.

1882.—The **tuberculin test** for tuberculosis first seriously considered as practical by Dr. D. E. Salmon, Chief of the United States Bureau of Animal Industry.

1883.—Ormonde, the thoroughbred, was foaled at Eaton Hall, seat of the Duke of Westminster. He died at Menlo Park, California, twenty-one years later. He started in sixteen races and won them all, including the English Derby, two thousand guineas, and St. Ledger. Wm. O'Brien McDonough, of California, paid \$150,000 for him. He was a majestic bay, 16.1 hands, and considered to be the grandest thoroughbred of his day.

1883.—The **Wyandotte breed of fowls** received their name in this year. It was proposed by Mr. Houdlette at Worcester, Mass. The breed was originated by Mr. John P. Ray, of Hemlock, N. Y., by a cross of a Sebright Bantam male with a yellow "Chitaton," which he named Sebright Cochins. Rev. A. S. Baker and Mr. Benson also produced similar fowls.

1883.—Roan Boy, **Shorthorn steer**, champion of American Fat Stock Show. Exhibited by C. M. Culbertson, of Newman, Ill.

1883.—Peter Collier, of New York, patented an invention for **recovering sugar** from beets, or refuse of sugar cane and sorghum.

1883.—American **Red Polled Cattle Society** organized. J. C. Murray, of Maquoketa, Iowa, Secretary.

1883.—First volume of the **North Wales Black Cattle Herd Book** issued; the second in 1886.

1883.—**Percheron Horse Stud Book** established in France.

1883. April 15th.—R. Gibson, of Delaware, Ontario, and Rigdon, Huston & Son sold **Shorthorns** at Dexter Park, Chicago, and thirty-two animals were sold for \$33,645, an average of \$1,111.35. The highest animal in the sale was the First Duchess of Hilldale, sold to Charles DeGraff, of Winona, Minn., for \$6,000.

1883.—De Laval **cream separators** first introduced and sold in the United States.

1883.—First year that middling **upland cotton** reached 20 cents per pound in New York City.

1883.—The Grove, 3d, **Hereford bull**, at nine years old sold by B. Rogers for \$4,250, in England.

1883. April 19th.—Two **Shorthorn sales**: Launcelot Palmer's Scotch at Dexter Park, Chicago; twenty-five head averaged \$625. Bow Park Bates cattle, thirty-six head, averaged \$325.55.

1883.—Lowest wheat, in October, 90 cents; highest, in June, \$1.13½.

1883.—St. Blaise, the famous race horse and sire, won the **English Derby** for Sir F. Johnstone, the time being 2:48 2-5. He was the second son of Hermit in succession that won the Derby.

1883. September 3d.—Jay-Eye-See trots in 2:10½ at Providence, R. I., establishing the **world's gelding record**.

1883.—The **Allen Shorthorn cattle records** purchased by the American Shorthorn Breeders' Association for \$25,000.

1883.—The London Mark Lane Express says: "The **dead-meat traffic** is beating the live-cattle traffic in the United States, and it would beat it in the trans-Atlantic business if it had fair play."

1884.—The **Bureau of Animal Industry** established to investigate and report upon domestic animal diseases.

1884.—At the St. Louis Cattle Growers' Convention, held in November, 1884, Mr. C. E. Wetzel, Assistant Secretary of the Colorado Cattle Growers' Association, said: "At this time there is an **irrepressible conflict** between the live stock shippers and the slaughterers. The live stock dealer, the middleman, is only a speculator, and the middleman must go, and the two controlling and only elements of the beef trade of the country will be narrowed down to the ranchmen and the slaughterers."

1884.—At the Cattlemen's Convention, held at St. Louis, November 17, 1884, Mr. Isaac H. Knox, then President of the St. Louis National Stock Yards, said: "It is one thing to kill cattle and another to dispose of the product. Slaughtering is the cheapest part of the whole business; the thing is to find a market. To sell the refrigerated product requires agencies and **cold-storage houses** in the East, and as it costs at least \$1,500 to build the smallest kind of a cold-storage house, it can easily be understood that to conduct a business of such a character requires enormous capital." This was in the early days of the dressed-beef business.

1884.—At the St. Louis Cattle Growers' Convention, held in November, 1884, Mr. H. L. Faust, of Salt Lake City, said: "In addition to the other schemes to be considered we will present the question of **refrigerator cars**. It is one of the utmost importance to the beef consumers of the East. If we could slaughter out West, instead of shipping our live cattle to the East, it would be an enormous saving to the consumer."

1884.—In this year a **Shropshire record** was established in Indiana by Mortimer Levering, Albert Henderson, Walter J. Quick, John L. Thompson, I. J. Farquhar, Geo. Allen, Sr., and W. C. Latta. The association was and is known to-day as the American Shropshire Registry Association.

1884.—A variety of **long-staple upland cotton** named "Cook," after the originator, was selected this year in a field of ordinary cotton by Mr. W. M. Cook, of Newman, Miss. Extensively cultivated in the Delta Region of Mississippi.

1884.—Beginning of four-years' **low prices of wheat**. Lowest price for No. 2 cash wheat, in December, 69½ cents; highest of the year, in February, 96 cents.

1884.—A dead heat was run in the **English Derby** between Mr. J. Hammond's great horse, St. Gatien, by Rotherhill, and Sir J. Willoughby's Harvester, by Stirling. The time was 2:46 1-5. This was the first time in history that the Derby went undecided.

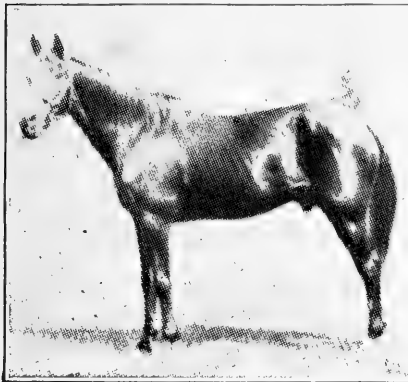
1884. April.—National Stockman, published at East Liberty, Pa., mentions 11½-pound **Delaine Merino sheep** fed by James McClelland, of Cannonsburg, Pa., which sold at seven cents per pound.

1884. May 8th.—The **National Dickinson Spanish Merino Register** incorporated in Ohio by James McDowell, H. G. McDowell, Wm. Beecher, Henry Everhard, G. W. Heldenbrand and A. C. McDowell.

1884. May 19th.—**National Meeting of Wool Growers** presided over by Hon. C. Delano at Chicago.

1884.—**Boulonnais Stud Book** established in France.

1884, June 11th and 12th.—A. C. Hamilton held a sale of **Shorthorns** at his farm near Lexington, Ky., at which an average of \$832.30 was made on 109 head.



JAY-EYE-SEE.—Picture taken in his old age. This famous black gelding by Dictator was the first 2:19 trotter, having trotted a mile in that time in 1884. Eight years later, in 1892, having changed his gait, he took a record of 2:05½ as a pacer. He is therefore champion combination trotter and pacer of the world.

1884, August 1st.—**Jay-Eye-See**, a black gelding, became the first 2:10 trotter, establishing that record at Providence, R. I. He was a son of Dictator, his dam Midnight, by Pilot, Jr., and was driven by Edward Bither. The next day Maud S., driven against time at Cleveland, Ohio, set the mark at 2:09¾, and later in the year, at Lexington, Ky., brought it to 2:09¼.

1884, August 28th.—At Leominster, England, the **Hereford bull** Lord Wilson, at nine years old, sold for \$20,000.

1884.—Clarence Kirklevington, the 2,400-pound **White Shorthorn**, won the championship at the Chicago Fat Stock Show.

1884.—National **Norman Horse Association** incorporated under name of National French Draft Horse Association.

1884, September 6th.—Drake Carter, a son of Ten Broeck, fixed the **three-mile running record** at 5:24 at Sheephead Bay, N. Y. He carried 115 pounds in going the distance.

1884, October.—Famous **Poland-China boar**, Bravo, 337, bought of Klever Bros., of Bloomsburg, Ohio, by Walker & Son, of New Madison, Ohio, for \$300.

1884, October 9th.—At Chicago, Johnston, the great pacer, by Joe Bassett, dam by Ned Forrest, set the **pacing record** at 2:06¼.

1884, November 15th.—In a few remarks addressed to the Cattlemen's Convention at St. Louis, Gen. W. T. Sherman said: "I sometimes deplore the disappearance of the **buffalo, elk and antelope**; but although these animals have disappeared, you have replaced them with probably 20,000,000 of fine bred stock which supply us with meat we eat and supply too much of the meat which is eaten in Europe."

1885.—In January, 1885, the Commercial Bulletin of Boston expressed satisfaction at a decision of Judge Cooley, fixing **rates on dressed beef** 75 per cent. higher than the rate for live cattle. Attention to this discrimination against dressed beef was invited by an article in the National Live Stock Journal of January 6, 1885.

1885.—E. W. Maslin, of California, planted **Smyrna seeds from best figs** imported by the wholesale grocery house of H. K. Thurner & Co., of New York, from which were grown large and flourishing trees.

1885.—On March 10, 1885, a London paper announced that F. D. Armour & Co. had sold five million cans of **fresh and corned beef** to be used by the British army then

doing service in the Soudan. To supply this contract required 70,000 head of live cattle.

1885.—The Boston Daily Advertiser of March 14, 1885, announced an auction sale of **Western dressed beef**, the first sale of its kind ever held in that city. Over 300 market men were assembled. The beef was sent there in refrigerator cars by the St. Louis Beef Canning Company, Wm. H. Monroe, Manager. At first the hind quarters sold at 11½ cents, and fore quarters at 5½ cents per pound; later the prices ranged from 8½ to 10 cents for hind quarters and 5¼ to 5½ cents for fore quarters.

1885.—Dr. W. S. Caruthers, of Cotulla, Texas, a retired army surgeon, associated with Mr. T. R. Keck, originated a machine whereby the **prickly pear**, abundant in Southern Texas, could be cut up and fed to cattle. Later on pear burners were invented to burn the thorns off as a further improvement in pear feeding.

1885.—First meeting of the **Society of American Florists** held in this year. Mr. John Thorpe was President.

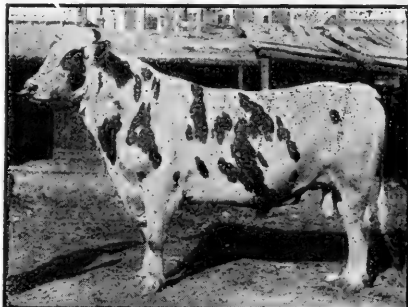
1885.—The **English Derby** was won by Lord Hastings's Melton in 2:44 1-5, Paradox finishing second. The winner was sired by Master Kildare.

1885.—Grover Cleveland, **President of the United States**, his first term, serving four years.

1885.—National **Live Stock Exchange** organized. President, W. H. Thompson, Jr.; Vice-President, Levi B. Doud; Secretary, C. W. Baker; Treasurer, G. W. Shannon.

1885.—Riley's Favorite, one of the recognized **varieties of corn**, originated in this year by James Riley, of Thorntown, Ind.

1885.—In this year a **chestnut horse** named Bull, but of pedigree unknown, trotted eighteen miles in harness, in a race, in 55:10.



HOLSTEIN-FRIESIAN BULL.—Champion at the St. Louis Fair. Owned by M. E. Moore, of Cameron, Mo.

1885, May 25th.—**Holstein-Friesian Association of America** incorporated by Theron G. Yeomans, William M. Singler, William C. Brayton, Thomas B. Wales, Jr., Gerritt S. Miller, Frederick C. Stevens, Wing R. Smith, J. D. Guthrie, Frederick J. Houghton, Francis W. Patterson, Wayne MacVeagh, G. M. Emerick, George F. Jackson, H. H. Hatth, William H. Hemingway, Daniel D. Durnall, Irwin Langworthy, John E. Tuckerman, Charles R. Payne, Robert Burch, E. R. Phillips and Solomon Hoxie.

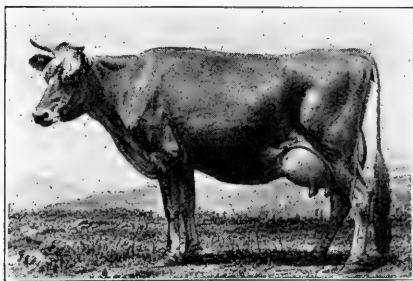
1885, July.—J. J. Coffman, of Danvers, Ill., bought of Klever Bros., of Bloomsburg, Ohio, the famous **Poland-China boar** Tecumseh, 4,339, for \$500.

1885.—Clingstone, by Rysdyk, and Guy, by Kentucky Prince, trotting together as a team against time, set the **mile record** at 2:17.

1885.—"Dandy," seven-months-old **David Victoria boar**, winner of grand sweepstakes over all other breeds at World's Industrial and Cotton Exposition, New Orleans, La.

1885.—Mr. J. B. Warren, of Larchwood, Iowa, imported thirteen head of **North Wales Black Cattle** from the Island of Anglesea.

1885.—Princess, 2d, a Jersey cow, owned by Mrs. S. M. Shoemaker, of Baltimore, Md., reported as having made over 46 pounds of butter in one week. Actual 46 and 50-64ths pounds. The milk yield was 16 per cent. fat.



JERSEY COW—PRINCESS. 2d, 8,048. Reputed record, 46 pounds 12½ ounces of butter in seven days. Owned by the late S. M. Shoemaker, of Baltimore, Md. From copyright photograph by permission of Schreiber & Sons, of Philadelphia, Pa.

1885.—Mr. J. C. Duncan, of Normal, Ill., imported "Normandie" cattle from France.

1885.—Guy, a son of Narragansett, negotiated a mile and three-eighths over hurdles in 2.35, at Latonia, Ky.

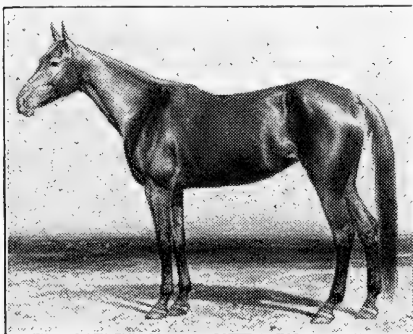
1885.—Mr. Albert Montgomery, of New Orleans, La., imported Brahmin or "Bou-chour" cattle from India.

1885.—The Hereford steer Regulus, exhibited by Fowler & Van Natta, champion steer at the American Fat Stock Show.

1885.—Lowest wheat, in March, 73½ cents; highest, in April, 91¾ cents.

1885.—December.—"The champion beef animal at Birmingham and London, England, Mr. Clement Stephens' Hereford heifer Luxury, yielded the extraordinary and hitherto unexampled proportion of 78¼ per cent. of dead meat." This is from John Coleman's Book on Cattle, Sheep and Pigs of Great Britain.

1886.—Hereford steer Rudolph, Jr., exhibited by George Morgan, champion steer at the American Fat Stock Show. First of the pony class to win the prize. His age was 883 days and show weight 1,530 pounds.



THE PEERLESS MAUD S.—On July 30, 1885, at Cleveland, Ohio, in her fourteenth year, MAUD S. reduced the one-mile trotting record to 2:08¾, which reigned supreme for six years. She was driven by W. W. Blair. This particular picture is from a copyright photo by permission of Schreiber & Sons.

1886.—Rev. F. von Schluembach, of Perry, Texas, imported two bulls and two heifers of the Simmenthal (Bernese) cattle breed of Switzerland. First ever brought to America.

1886. March.—Tennessee importation of jacks and jennets from Spain by J. D. & W. H. Goodpasture and R. H. Hill.

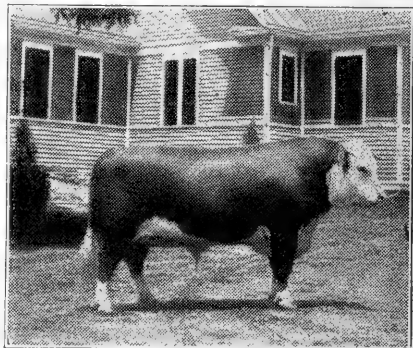
1886.—At the Weatherford Convention of the Northwest Texas Cattle Raisers' Association, held in March, 1886, there were two resolutions adopted in regard to dressed beef, and the second one grew out of the fact that the Eastern railroads in the hands of a pool controlled by Commissioner Pink had arranged a discrimination against dressed beef. The action taken by the Texas cattle raisers was as follows: "Resolved, That we believe it to be to the interest of the producers and consumers as fostering competition among buyers in our principal Western markets and among sellers in the Eastern markets that the rates of transportation on dressed beef and live cattle be as two to one. Resolved, That we endorse Commissioner Pink's action in advancing the rate on dressed beef to the Eastern markets."

1886.—Ormonde, the celebrated son of Ben d'Or, owned by the Duke of Westminster, was the victor in the English Derby, winning in 2:45 3-5 from that grand horse The Bard, which finished second.

1886. August 2d.—An act of Congress was passed specially authorizing the use of harmless butter color.

1886.—Suffolk sheep first given a class in English Royal Agricultural Exhibitions.

1886.—The first Yorkshire hogs recorded in Canada.



IMP. SALISBURY—Prize-winning Hereford bull, highly representative of the breed. Owned by Murray Boocock, of Keswick, Albemarle county, Va.

1886.—Highest price for middling upland cotton on New York market: Market below 70 cents, for the first time in forty-four years. Highest price of the year, 99-16 cents; lowest, 8 13-16 cents per pound.

1886.—Mr. F. Roeding, banker, of San Francisco and proprietor of Fancher Creek Nurseries of Fresno, sent his foreman, C. S. West, to Smyrna, and was successful in obtaining good cuttings of the Smyrna figs; most important step towards establishing this industry in the United States.

1886. May.—At Latonia Race Track, Kentucky, the mile and one-sixteenth hurdle race record of 1:59¼ was made by the horse Judge Jackson, a son of Buckden.

1886. August 29th.—Winslow, a son of the great Ten Broeck, made a mile and one-eighth over hurdles at the Westside Track, Chicago, in 2:02¾.

1886.—Kerry cattle from Ireland imported into the United States by Mr. Edward Kemp, of Rumsen Neck, N. J.

1886.—First volume of American Aberdeen-Angus Cattle Record issued.

1886.—Lowest wheat, in October, 69¾ cents; highest, in January, 84¾ cents.

1887.—Daisy D. and Silver Tail, the former by Black Steer, the other by Tempest, Jr., paced a mile as a team in 2:18½. It was not extremely fast, but fast, considering the period.

1887.—Mr. Abington's Merry Hampton, by Hampton, proved the winner of the **English Derby** in 2:43, The Baron finishing second.

1887, May 1st.—In this month were delivered at Coolidge, Kas., and Lamar, Colo., 1,935 **Hereford, Shorthorn and Aberdeen-Angus bulls**, contracted by C. C. Campbell and T. J. Bunton to J. V. Farwell & Co., for the 3,000,000-acre ranch of the Capitol Syndicate in the Panhandle of Texas, the largest delivery of its kind in history.

1887.—Mr. Cobb Gavitt, of Evergreen Park, near Ashley, Ohio, imported three **Shetland ponies** bought of the Marquis of Londonderry.

1887, June.—**Live Stock Breeders' Directory** of the United States and Canada published by Philip H. Hale, of St. Louis, Mo.

1887.—Importation of **Simmental cattle** to this country by John Dick, of Quincy, Ill.

1887.—F. A. Thomas, of Chicago, and Mr. Parker Earle, of Cobden, Ill., revolutionized the **fresh fruit transportation** by shipments to all parts of the United States.

1887, June 21st.—In a **hurdle race** at Sheephead Bay, N. Y., Buckra, an aged horse by Buckden, made the fast record for two and a quarter miles of 4:26. He carried 168 pounds for this performance.

1887.—Johnston, the great son of Joe Bassett, dam Cary mare, by Ned Forrest, placed the **pacing record to wagon** at 2:14 $\frac{1}{2}$. This was in a competitive race.

1887.—D. M. Moniger's Dr. Glick, **Shorthorn steer**, champion at American Fat Stock Show.

1887, July 3d.—Notable shipment of a car-load of **tomatoes** from Humboldt, Tennessee, by W. R. Rea, and consigned to Charles Richardson, of New York City. Practical commencement of truck farming in West Tennessee.

1887, September.—First car-load of **Colorado celery** shipped East by C. T. Fort from Denver, Colo.

1887.—**American Essex Association** incorporated in Illinois.



ESSEX BOAR—MODEL JIM, 1,081. First-prize and sweepstakes winner at the St. Louis Fair, both years, 1901 and 1902; also winner of many other first prizes. Never defeated in the show ring. Bred and owned by Peter Miller & Son, of Belleville, Ill.

1887, November 1st.—Opening of the **Sioux City Stock Yards** of Iowa for business. President and Treasurer, D. T. Hedges; Vice-President, James E. Booge; Secretary, Ed. Hankinson. These three with A. S. Garretson and W. V. Hedges constituted the Board of Directors.

1887.—**Galloway steer**, winner at Smithfield Show, weighing 2,464 pounds.

1887.—Introduction of commercially valuable **incubators for artificial hatching** dates from this year.

1887.—**Lowest wheat**, in August, 66 $\frac{1}{2}$ cents; highest, in June, 94 $\frac{1}{2}$ cents.

1887.—In this year the experiment of disposing of **California fruit at auction** was tried in New York by Messrs. Sgobel & Day, at that time agents for the California Fruit Union, and the result proved favorable.

1888.—The **Aberdeen-Angus steer**, Dot, exhibited by Mr. Imboden, champion at the American Fat Stock Show. Age, 863 days, and show weight, 1,515 pounds.

1888, May 5th.—The Peninsula and Oriental Company's steamer "Oceanica" sailed from Melbourne, Australia, with 500 tons of **Australian apples**, reaching London June 12th, mostly in sound condition. Beginning of ocean commercial refrigeration.

1888.—Hellriegel, a German chemist and investigator, announced that the **nodules on the leguminous plants** were colonies of bacteria, and that their work was to take up nitrogen from the air and convert it into plant food.

1888.—In this year the **White Wyandotte** was admitted to the standard of the American Poultry Association. The credit of their origin is given to Geo. W. Towle, of Truxton, N. Y., and B. M. Briggs, of Wyandale, N. Y.

1888, August 21st.—The 'record for a mile and three-sixteenths,' which is 2:12, was made by Jim, a four-year-old, by Fellowshipcraft, at Saratoga, N. Y.

1888, September 17th.—Organization of the **American Breeders' Association of Jacks and Jennets** at Springfield, Ill. President, Chas. E. Leonard, of Bell Air, Mo.; Vice-President, Albert Babb, of Taylorville, Ill.; Secretary, W. H. Goodpasture, of Nashville, Tenn.; Treasurer, Major Wm. Gentry, of Sedalia, Mo.

1888.—Johnston paced a mile under saddle in 2:11, breaking the record of 2:14 $\frac{1}{2}$ held since by Billy Boyce, a son of Old Corbeau. Johnston's feat has never been excelled.

1888.—**Polled Durham cattle** first recognized as a distinct breed by the Ohio Centennial and State Fair. Exhibitors, Shafer & Clawson and Captain W. S. Miller.

1888, October 19th.—Sunol, a bay filly, placed the one-mile two-year-old **trotting record** at 2:20 $\frac{1}{2}$ at San Francisco.

1888.—J. D. & W. H. Goodpasture, of Nashville, Tenn., made the largest individual **jack and jennet importation**—fifty-seven head.

1888.—**Lowest wheat**, in April, 71 $\frac{1}{2}$ cents; highest, in September, caused by the Hutchinson Corner, \$2.00, declining to \$1.04 $\frac{1}{2}$ the next day.

1888.—Prof. W. M. Hays, of the Minnesota Experiment Station, began a series of **systematic wheat experiments** of invaluable service to the wheat growers of the country.

1888, November.—The **lamb-feeding industry** in Larimer county, Colorado, commenced by Bennett Bros., of Fort Collins, purchasing 2,500 Mexican lambs, which they intended feeding corn at Paxton, Neb.; but, being snowbound in transit, the lambs were brought to Fort Collins and fed on alfalfa with corn added to the ration later. The result was that they gained rapidly in flesh and condition and topped the Chicago market at \$5.40 per 100 pounds. By the year 1900 the lamb-feeding industry of Colorado had increased to 351,225 head in one season.

1888.—Iron framework first used in **greenhouse construction** in this year and came rapidly into use.

1888.—Ayrshire, owned by the Duke of Portland, a horse sired by Hampton, won the **English Derby**, and also incidentally established the fastest time in its history to that date, that of 2:42 1-5.

1889.—An Arkansas firm imported twenty-five fine **jacks and jennets** from Spain. Exhibited at the St. Louis Fair.

1889.—Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, determined upon a line of investigation of **Southern cattle fever**, resulting in the adoption of the tick theory as the cause of disease. The experiments were conducted by Dr. F. L. Kilborne.

1889.—**Shorthorn steer** Rigdon exhibited by Elbert & Fall, champion at the American Fat Stock Show.

1889.—The white variety of **Orpington fowls** established a breed that dates from this year.

1889.—The Department of Agriculture imported rooted suckers of the **Date Palm** from Algerian Sahara and Egypt and sent them to New Mexico, Arizona and California.

1889.—The Duke of Portland won the **English Derby** with the horse Donovan, which was sired by Galopin. The time was 2:44 2-5. A horse named San Miguel was second.

1889.—In the year 1889 the legislators of the state of Virginia enacted a law which was intended to shut **dressed beef** out from that state. The law prohibited the offering for sale of fresh meat at places 100 miles or more distant from the places of slaughter unless it had been inspected by the local inspectors of Virginia, for which inspection the owner of the meat had to pay one cent per pound. The inspection alone amounted to from \$6.00 to \$10.00 per head. It was pronounced unconstitutional. This was an example of state enactments passed for the purpose of interfering with interstate commerce and more especially to please the butchers who were trying to kill the dressed-beef trade by law.

1889.—The "**Carman**" peach originated from seed planted by J. W. Stubenrauch, of Mexia, Texas. Early variety and comparatively free from rot.

1889.—Through influence of Prof. H. E. Van Demen, Pomologist, and Prof. C. V. Riley, Entomologist, the United States Department of Agriculture secured and distributed **Capri fig cuttings** from Turkey.

1889.—Benjamin Harrison, **President of the United States**, and served four years.

1889.—Union Cold Storage Company of Chicago, first Western establishment to offer **mechanical refrigeration** for general storage, apples being the first fruit stored.



HON. NORMAN J. COLMAN.

1889, February 11th.—Hon. Norman J. Colman, of Missouri, editor and proprietor of the **Rural World**, appointed the first **Secretary of Agriculture** by President Grover Cleveland. Previously the highest officer of the Agricultural Department was Commissioner.

1889.—**Lowest wheat**, in June, 75½ cents; highest, in February, \$1.08¾.

1889, August 25th.—Death of Henry Shaw, Born in Sheffield, England, July 24, 1900. He gave the famous Shaw's Botanical Garden and Tower Grove Park to the city of St. Louis.

1889, August 30th.—The **fastest half mile** on the running turf was made by Geraldine at New York in 0:46. It was on a straight course, and she was carrying 122 pounds. Geraldine was by Grinstead, and four years old when this record was made.

1889, October 11th.—At Terre Haute, Ind., Axtell **trots a mile** in 2:12, establishing three-year-old and stallion record.

1889, November 14th.—**American Polled Durham Breeders' Association** organized. President, Wm. W. Crane, of Tippecanoe City, Ohio; Secretary, A. E. Bureleigh, of Mazon, Ill.

1889.—Luke M. Emerson, of Bowling Green, Mo., imported **Catalonian jacks**.



HON. JEREMIAH M. RUSK.

1889.—Jeremiah M. Rusk, of Wisconsin, **Secretary of Agriculture** under President Benjamin Harrison.

1889.—The **American Agriculturist corn contest** for the largest yield of corn on one measured acre. Grand prize won by Zachariah Jordan Drake, of Marlboro county, South Carolina, who grew 255 bushels of shelled corn or 239 bushels crib-cured corn at a high net cost of 44 cents per bushel. Second prize won by Alfred Rose, of Yates county, New York, who grew 213 bushels of shelled corn or 191 bushels of crib-cured corn at a cost of 16 cents per bushel. Third prize won by George Gartner, of Pawnee county, Nebraska, who grew 171 bushels of shelled corn or 151 bushels of crib-cured corn at a cost of 47 cents per bushel.

1890.—The census of this year enumerated 596 **seed farms** in the United States, containing 109,850 acres, of which 96,567 acres were actually producing seed crops.

1890.—**Silver Mine**, a standard variety of **white corn**, originated in this year by J. H. Beagley, of Sibley, Ill.

1890, February 20th.—The **National Live Stock Reporter** established at the St. Louis National Stock Yards by Philip H. Hale.

1890.—**Center of United States population**, twenty miles east of Columbus, Ind.

1890.—The **Babcock Cream Tester** invented by Dr. S. M. Babcock, of Madison, Wis., and generously given over to public use and benefit without charge.

1890.—The United States Census reported 4,564,641 **farms in the United States**, an increase of 555,734 in ten years.

1890.—Dispersion of the **Cruickshank Shorthorns**, the breeder being 82 years old.

1890.—Great improvement in **cream separators** by Baron von Fechtoldsheim, of Germany. Hand separator made possible by Alpha disc system.

1890.—The **Holstein cow**, Pauline Paul, owned by J. E. Litcher & Son, of Pawling, N. Y., reported as having made 1,153 and 63-64ths pounds of butter in one year.

1890, May 1st.—**First alfalfa** sown on Woodland Farm, Ohio, by Joseph E. Wing. Really the beginning of successful alfalfa culture east of the Missouri river.

1890.—**Village postal delivery** recommended by Postmaster-General Wanamaker, a forerunner of Rural Free Delivery.

1890, July 8th.—The **record for seven-eighths of a mile**, running over a straight course, was placed by Bella E., a five-year-old, at 1:23½, at Monmouth Park, with 103 pounds up. Bella E. Was by Enquirer.

1890.—Louisiana became first in rank of **rice-growing states**, displacing South Carolina.

1890.—Illinois State Fair at Peoria. Great contest of champion **Shorthorn bulls**. Cup Bearer, Phenomenon, Goldstick and Young Abbottsburn, the latter the victor; weighed 2,800 pounds; owned by T. S. Moberly, of Kentucky.

1890.—The **English Derby** was won by Sir James Miller's Sanfoin, by Springfield. There were only eight starters, and LeNord was second. The time was 2:49 $\frac{1}{4}$.

1890, July 17th.—Banquet the mighty race horse, placed the **record for the Derby distance** (2 mile and a quarter) at 2:03 $\frac{1}{2}$ at Monmouth Park over a straight course. Banquet was by Imported Raymond d'Or, and was one of the greatest horses that ever lived.

1890, August 20th.—The **fastest horse running record** for a quarter of a mile was made by Bob Wade, a four-year-old, at Butte, Mont. The time was 0:21 $\frac{1}{4}$.

1890.—Center of the **number of farms** in the United States, eighty-two miles south by west of Indianapolis, in Washington county, Indiana.

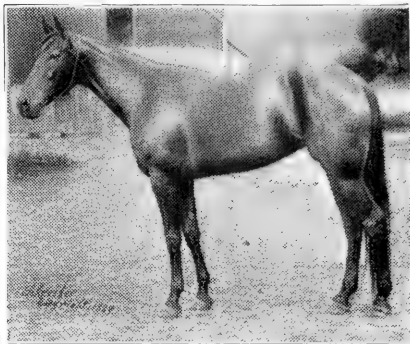
1890.—The **Shorthorn steer** Nonesuch, exhibited by W. H. Renick, champion at the Chicago Fat Stock Show.

1890, August 28th.—The famous **running horse** Salvator made the phenomenal mile record of 1:35 $\frac{1}{2}$ at Monmouth Park over a straight course in a race against time. Salvator was by Imported Prince Charlie. When he performed this feat he was a four-year-old and carried 116 pounds.

1890.—**Lowest wheat**, in February, 71 $\frac{1}{2}$ cents; highest, in August, \$1.08 $\frac{1}{4}$.

1890.—**Swine in Ireland**, 1,570,366 head, the largest number known in that country.

1891, June 22d.—Kingston, the son of the great Spendthrift, carrying 139 pounds, set the mark for the **Futurity Course**, which is 176 feet less than three-fourths of a mile, in 1:08. The performance was made at Coney Island, N. Y.



SUNOL, 2:08 $\frac{1}{4}$, by Electioneer.

1891.—Sunol, bay mare by Electioneer, dam Woxana, by General Benton, became champion trotter, clipping a half second off the record established by Maud S, in 1885 and **reducing the world's mark** to 2:08 $\frac{1}{4}$. The record was made at Stockton, Calif., where she was driven by Charley Marvin.

1891.—Mr. James Shinn, of Niles, Calif., obtained the first specimens of **Blastophaga**, the **fig fertilizing insect** from Syria.

1891, August 15th.—The first horse to run **three-eighths of a mile** in 0:34 on the American Turf was Fashion, a four-year-old, and the record was made at Lampasas, Texas. This record was later equaled on July 22d, 1896, by Red S., an aged horse, carrying 122 pounds, at Butte, Mont., and thus held jointly by the two.

1891.—The two-year-old **Hereford steer** Hickorynut, exhibited by W. S. Van Natta, champion at the American Fat Stock Show. At 351 days his weight was 1,629 pounds.

1891, September 3d.—At Independence, Iowa, Direct, black horse by Director, paces in 2:06, **making world's record**.

1891.—The **Blanche Ferry**, a descendant of the Painted Lady, first valuable variety of the **modern sweet pea**, introduced by American seedsmen.

1891.—The **largest week's receipts of cattle** at any market were recorded at Chicago during the week ending September 19th, the total being 95,524 head.

1891.—First two-billion-bushel **corn crop** in the United States; officially 2,060,154,000 bushels.

1891, November.—At the Chicago Dairy Show the **Brown Swiss**, cow Brienze, owned by Abe Bourquin, of Nokomis, Ill., made 9.32 pounds of butter-fat in three days, being the largest yield in public competition.

1891.—**Three-year-old beef cattle** dropped from classes of the American Fat Stock Show.

1891.—**Lowest wheat**, in July, 85 cents; highest, in April, \$1.16.

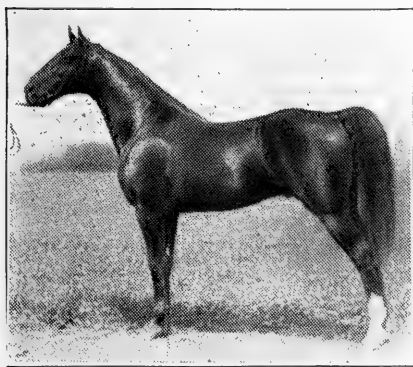
1891.—A horse named The Common, by Isonomy, owned by Sir F. Johnstone, was the winner of the **English Derby**. The time made, 2:56 4-5, was the second slowest in its history. Gouverneur ran second.

1891.—The pacer Joe Jefferson made the fastest **record for four miles in harness**, his time being 10:10. This record was made against time.

1891.—The **Smyrna fig** first hand pollinated by Dr. Eisen at Niles, Calif.

1891, November 10th.—At Stockton, Calif., Arion trots in 2:10 $\frac{3}{4}$, the **world's two-year-old record**.

1891, November 17th.—Palo Alto establishes a **world's stallion record** by trotting a mile in 2:08 $\frac{3}{4}$.



REX PEAVINE—Saddle stallion. Owned by Dr. W. L. Hockaday, of Richmond, Ky. Winner at Louisville (Ky.) State Fair. Representative American saddle horse.

1891.—The American (formerly National) **Saddle Horse Breeders' Association** organized at Louisville, Ky., and issued the first volume of the American Saddle Horse Register the year following.

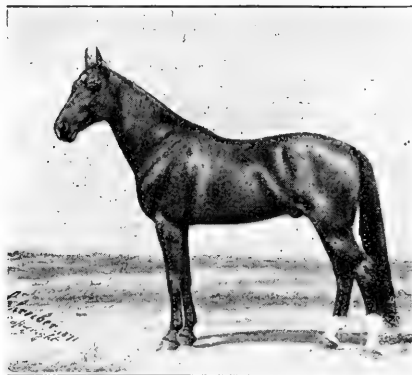
1891.—Allerton, one of the greatest race horses and sires of extreme speed in the history of the trotting turf, was sent a **mile trotting to wagon**, and set the trotting mark at 2:15. He was sired by Jay Bird, and his dam was Gussie Wilkes, by Mambrino Boy.

1891.—In this year the unique performance of **three horses trotting a mile abreast** was made in the fast time of 2:14. The horses were Belle Hamlin, bay mare Globe, bay gelding; and Justina, bay mare; all by Almont, Jr.

1891.—Captain S. F. Fountain, United States Cavalry, with mounted detachment, rode eighty-four miles in eight hours, a **record of horse endurance**.

1891.—The **Berry Farmer**, published by B. F. Smith at Lawrence, Kansas, one of the early fruit publications of the West. Short-lived but valuable.

1891, December 9th.—At the St. Louis National Stock Yards first exhibition of **car-loads of live stock for prizes in pens** of a public stock yard. Premiums paid by Philip H. Hale, publisher National Live Stock Reporter.

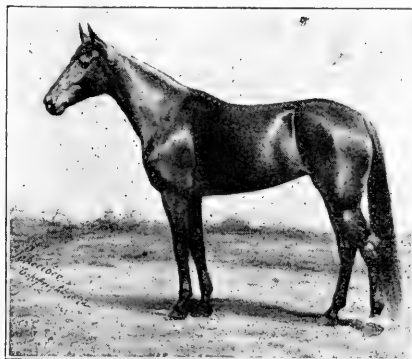


HAPPY MEDIUM, 2:32½—TROTTING SIRE. By Hambletonian. Sire of Nancy Hanks, 2:04; Riley Medium, 2:10¼; Maxie Cobb, 2:13½; and many others in the 2:15 list. From copyright photo by permission of Schreiber & Sons, of Philadelphia, Pa.

1892, February 4th.—German, Hanoverian and Oldenburg **Coach Horse Association of America** organized. President, A. H. Holbert, of Greeley, Iowa; Secretary, Jephtha Crouch, of Lafayette, Ind.

1892, April 27th.—First **car-load of tomatoes** from Florida shipped to England.

1892, June 5th.—Sir John, by Sir Modred, took a **record of 2:14¼** for a mile and sixteenths over the New York Jockey Club Course.



NANCY HANKS, 2:04.

1892.—Nancy Hanks, the famous daughter of Happy Medium and Nancy Lee, by Dictator, jumped into fame by **lowering the trotting record to 2:07¼**. The record was made at Chicago, Ill., August 17th. Budd Doble driving. It was an attempt against time. On the last day of the same month, at Independence, Iowa, she performed the phenomenal feat of taking two more full seconds off the record, reducing it to 2:05¼. A month later, at Terre Haute, Ind., driven by Doble, she brought the mark down to 2:04, her best record. Thus from August 17th to September 28th, a space of forty-one days, this thrice-crowned champion cut 4¼ seconds from the world's great record. She was indeed a marvel. The Bike Sulky dates from this time in trotting and pacing races.

1892.—Mr. Geo. C. Roedding, of San Francisco, Calif., secured **consignments of figs** containing Blastophagas (the fig fertilizing insect) from Smyrna, in Asia.

1892.—American pears, plums, peaches and oranges were **first exported** commercially to England.

1892.—Largest **receipts of cattle** in one year at the Union Stock Yards, Chicago, 3,571,796 head.

1892.—**Sheep in Ireland**, 4,827,777, the largest number known in that country.

1892, July 21st.—Mald Marian, in her three-year-old form, **set the mile and twenty yards running record at 1:40** at Washington Park, Chicago.

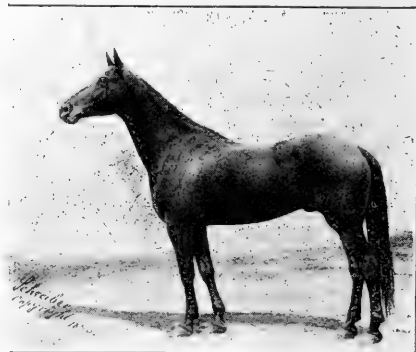
1892, September 22d.—At Providence, R. I., Belle Hamlin and Honest George **trotted a mile as a team** against time, and brought the record to 2:12¼, beating the previous record of 2:13, made in 1891 by Belle Hamlin and Justina.

1892.—Potts & Son's **Shorthorn steer King**, champion at Stock Yards Fat Stock Show, Chicago.

1892, September.—Largest **receipts of cattle** in one month at the Union Stock Yards, Chicago, 385,469 head.

1892.—Sir Hugo, sired by Wisdom and owned by Lord Bradford, took the **English Derby** from a field of thirteen starters. The time, 2:14, was fair. LaFleche was second.

1893.—Grover Cleveland, **President of the United States**, his second term, serving four years.



MASCOT, 2:04—PACING GELDING. In the year 1892, for the first time, a trotter, Nancy Hanks, and a pacer, MASCOT, divided the honor of being the fastest light-harness performer.

1892, November 8th.—Direct **paces a mile in 2:03½**, making a world's stallion record. This at Columbus, Tenn.

1892, November 10th.—**Western Holstein-Friesian Association** incorporated. President, M. E. Moore, of Cameron, Mo.; Vice-President, E. F. Irwin, of Richfield, Minn.; Treasurer, J. B. Zinn, of Topeka, Kas.; Secretary, W. F. Whitney, of Marshall, Mo.

1892.—**Lowest wheat**, in October, 69½ cents; highest, 91¼ cents, in February.

1893.—Columbian Exposition **Shorthorn contest**. Champion bull, any age, Colonel T. S. Moberley's Young Abbottsburn; champion female, J. G. Robbins & Sons' Gay Mary.

1893.—Early in this year California made her first attempt to **export fruit to England** under the general management of the Earl Trust Company. The orange growers of Azusa, Duarte and Covina, Los Angeles county, contributed the fruit. One car, containing 290 boxes, left New York on the steamer Teutonic on March 8th, consigned to L. Connolly & Co., of Liverpool. The consignment was a success. The authority of this statement is Bailey's Annals of Horticulture.

1893.—**Lowest wheat**, in July, 54½ cents; highest, in April, 88 cents.

1893.—Nightingale, by Mambrino King, dam by Hambletonian, 572, placed the **three-mile trotting record** at 6:55 $\frac{1}{2}$.

1892.—Mascot, bay gelding, by Deceive, divided honors with the trotting mare Nancy Hanks by reducing the **one-mile pacing record** to 2:04. This at Terre Haute, Ind., September 18th.



Prize-winning Angora goat.

1893.—Dr. C. P. Bailey, of San Jose, Calif., imported two **Angora bucks** from South Africa.

1893.—Champion **beef animal** at Columbian Exposition, the Shorthorn beef steer Cup Bearer, exhibited by Milton E. Jones, of Williamsville, Ill.

1893.—Isinglass, by Isonomy, owned by W. H. McCalmont, won the **English Derby** in 2:48.

1893, March 10th.—First bottle of "**certified milk**" delivered by Stephen Francisco, of Essex county, New Jersey.

1893.—F. J. Merriam, pioneer **market gardener** of Georgia, commenced operations in this year near Atlanta.

1893, July 4th.—At Kirkwood, Del., Ayres P., a chestnut gelding by Prosper Merrimée, **trotted a mile** against time alongside of a running mate in 2:03 $\frac{1}{4}$.

1893.—**American Yorkshire Association** organized. Hon. W. M. Liggett, President; and Major A. G. Wilcox, Secretary.

1893, September 15th.—Flying Jib, bay gelding by Algona, **paces a mile** in 2:04 at Chicago, equalling the world's record. This was a performance against time.

1893, October 17th.—Fantasy, bay mare by Chimes, trots in 2:08 $\frac{3}{4}$ at Nashville, Tenn., establishing the world's **record for three-year-old filly**.

1893, October 18th.—At Nashville, Tenn., Direction, by Director, trots in 2:05 $\frac{1}{4}$, establishing a world's **four-year-old record**.

1893.—The San Jose scale, the most dangerous enemy to fruit trees, discovered in New Jersey. It was brought from California upon nursery stock.

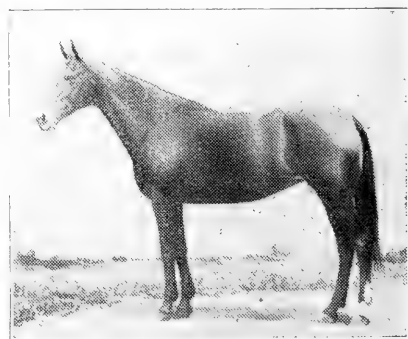
1893.—At Luenburg, Mass., Luther Burbank originated the famous **Burbank potato**, his first important success in plant improvement.

1894.—**Cotton boll weevil** first came to notice of Department of Agriculture as important enemy of cotton in Texas.

1894, July 5th.—The **fastest time for a mile and three-eighths** was made by Sabine, by Rossington, at Washington Park, Chicago, the record being 2:18 $\frac{3}{4}$.

1894, August.—First car of **crated cabbage** shipped from Denver, Colo., by C. T. Fort.

1894, September 12th.—Robert J., a bay gelding by Hartford, establishes world's **mile pacing record** in 2:01 $\frac{1}{2}$ at Terre Haute, Indiana.



ALIX, 2:03 $\frac{3}{4}$.

1894.—**Division of soils** organized in the United States Weather Bureau by executive order, afterwards enlarged in Department of Agriculture.

1894.—The **fastest team record** in a trotting race was placed at 2:51 $\frac{1}{4}$ by Sally Simmons, a daughter of Simmons, and Sally Adams, by John Burdine, and Roseleaf, a mare by Goldleaf, dam Florence B., by Atlantic.

1894, September 19th.—Alix, bay mare, by Patronage, dam by Attorney, placed the **mile trotting match** at 2:03 $\frac{3}{4}$ at Galesburg, driven by Andy McDowell.

1894, September 27th.—Abdell, bay colt, by Advertiser, establishes **yearling world's trotting record** for one mile in 2:23 at Stockton, California.

1894.—The system of putting up **cotton in cylindrical bales** started at Waco, Texas.

1891, October 3d.—At Chillicothe, Ohio, Flying Jib, the famous pacer, hitched with a running mate, **went the mile** in the remarkably fast time of 1:58 $\frac{1}{4}$, the fastest mile negotiated to that time by a harness horse; but the momentum given by the runner takes some merit from the performance. This style of racing is not now in vogue.

1894, October 9th.—Maid Marian, the four-year-old daughter of Imported Great Tom, **galloped five-eighths of a mile** over the New York (straight) Course in 0:56 $\frac{3}{4}$, breaking all records.



HON. J. STERLING MORTON.

1893.—J. Sterling Morton, **Secretary of Agriculture** during second term of President Cleveland.

1894.—At the Dairy Show in England in this year a pair of **Single-comb Buff Orpington** fowls were exhibited by Mr. Cook, of Tower House, Orpington, the originator of the breed.

1894.—**Lowest No. 2 cash wheat** in September, 50 cents; highest, in April, 65¼ cents.

1894.—**American Agriculturist** changed from a monthly to a weekly publication.

1894.—**Champion beef animal** at American Fat Stock Show, the Shorthorn steer "Whiskers," exhibited by J. H. Potts & Sons. Weight at 1,048 days, 1,776 pounds.

1894.—**White Cupid**, a famous variety of the **sweet pea**, discovered as a chance sport on the seed farms of C. C. Morse & Co., of California.

1894.—Gilbert H. Hicks placed in charge of first **government laboratory** for testing seeds.

1894.—Lord Roseberry won the **English Derby** with Ladas, by Hampton, in 2:45 4-5. The field was the smallest in the history of the classic, there being only seven starters.

1895.—The **trotting record** for three miles of 7:36½, in a race, was made by Fairywood, a bay gelding by Milbourne, dam by Fairy Gift.

1895, February 11th.—Largest receipts of **hogs** in one day at the Union Stock Yards, Chicago, 74,551 head.

1895.—**Galloway cattle** shown at Birmingham and Smithfield.

1895, April 5th.—**Horse and mule market** opened at the St. Louis National Stock Yards by John Kirk and T. T. Ruby, commission salesmen, and A. Heiman, mule dealer. John Kirk held the first auction.



MR. A. HEIMAN, mule dealer, who—as the only operator in the yards at the time—established the great modern mule market at the St. Louis National Stock Yards.

1895, July 24th.—The **Sioux City Stock Yards** passed into possession of the Sioux City Stock Yards Company. Col. I. C. Elston, President, of Crawfordville, Ind.; Mr. F. W. Estabrook, Vice-President, of Nashua, N. H.; Mr. F. L. Eaton, Secretary and Treasurer, of Sioux City, Iowa.; Mr. H. P. Chesley, General Manager, of Sioux City, Iowa. The Board of Directors included Messrs. John Ellis, of Kewanee, Ill.; Joseph C. Head, of Latrobe, Pa.; Wm. Reynolds, of Marblehead, Mass.; and Michael Cudahy, of Chicago, Ill.

1895, September 10th.—The **steamship Southern Cross**, 5,950 tons register, arrived at London from Sydney, Australia, laden with cattle, sheep and horses. This was the **first large cattle shipment of live animals** from the Antarctic continent. The ship's voyage was by way of Montevideo, in order to avoid the heat of the Red Sea. The shipment consisted of 550 cattle, 488 sheep and 29 horses, all in charge of thirty men. The deaths en route were fifty-two cattle, eighty-two sheep and one horse. The cost of transportation, feed and attendance was \$68.25 per head for horses and cattle and \$6.00 per head for sheep. The shipment was not a financial success.

1895.—**Lowest wheat**, in January, 48¾ cents, being the lowest on record; highest of the year, in May, 85¾ cents.



MR. THOS. W. CROUCH, mule dealer and representative of the old Broadway Mule Market of St. Louis, who contracted for the removal of the entire mule trade of the city of St. Louis to the National Stock Yards.

1896, February 3d.—The old Broadway **horse and mule market** at St. Louis, which, beginning at a period around 1853, had become the greatest in the world, was totally abandoned, all of the remaining firms removing to the St. Louis National Stock Yards, where the modern St. Louis horse and mule market had previously been established. The firms which moved across the river were the Western Sale Stables Company; Maxwell & Crouch Mule Company; Sparks Bros.; Charles Cahn & Son; Jacques, Levy & Co.; and J. D. Guyton & Co. That day's receipts were 1,372 head.

1896.—Lord Roseberry won the **English Derby** for the second time with Sir Visto, a son of Barcalaine. Time, 2:43 2-5.

1896.—This year the maximum crop of **Sea Island cotton** in the United States was grown, there being 103,516 bales reported to the United States government as the crop of 1896-97.

1896.—In this year the record of 2:30 for a mile was made by a **four-in-hand of trotters**, consisting of Damiana, a chestnut mare; Belnut, a chestnut gelding; and Maud V. and Nutspat, also chestnut mares; all sired by Nutmeg.

1896, March 24th.—Patent for a **single-disc plow** granted to C. A. Hardy, and manufactured by the Texas Disc Plow Co.

1896.—At Madison Square Garden Live Stock Show the **Hereford steer** "Jack," a yearling, was grand champion.

1896, June.—**Top native cattle** at Chicago sold at \$4.65 per 100 pounds, the lowest in about twenty-five years.

1896.—Mr. Arnold Cooper, of Richmond, Natal, South Africa, noticed grasshoppers to be dying from **fungus disease**. The knowledge since used for destruction of the grasshopper pest.

1896.—The Prince of Wales' entry, Persimmon, a son of St. Simon, won the **English Derby** from a field of eleven in the fast time of 2:42, St. Frusquin running second.

1896, June 6th.—The use of harmless coloring matter in the manufacture of cheese was specially authorized by law.



JOHN R. GENTRY, 2:02 $\frac{1}{2}$.

1896, September 24th.—John R. Gentry, bay horse by Ashland Wilkes, paces a mile in 2:00 $\frac{1}{4}$, establishing a world's record.

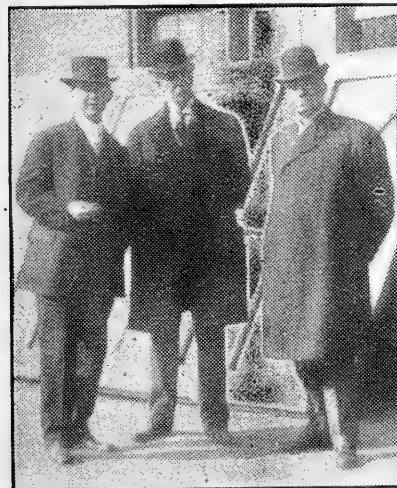
1896.—Buff Orpington fowls established as a distinct family in this year.

1896.—Vegetable canning on commercial basis. Record for United States and Canada, 3,511,188 cases of tomatoes and 2,676,515 cases of canned corn. Each case contained two dozen standard cans.

1896, October 1st.—First Rural Free Delivery Postal Routes established in this country at Halltown, Uvilla and Charlestown, W. Va. Hon. Wm. L. Wilson was Postmaster-General.

1896.—Lowest wheat, in June, 58 $\frac{1}{2}$ cents; highest, in November, 94 $\frac{1}{2}$ cents.

1897, January 1st.—The West Philadelphia Stock Yard Company succeeded the old Stock Yard Company, which had been in business since 1876. Officers of the new company: Thos. B. Shriver, President; and Joseph M. Harlan, Secretary and Treasurer. Board of Directors—Thos. B. Shriver, S. W. Allerton, D. H. Sherman, D. B. Martin, A. M. Fuller, W. M. Fuller and Joseph M. Harlan.



J. J. SEARCY on left, JOSEPH MAXWELL in center, and FRANK SLOAN on the right, three of the pioneers of the St. Louis horse and mule market.

1897.—At the meeting of the Association of Agricultural Colleges and Experiment Stations a committee was appointed, consisting of Professors Jenkins, Card, Lazenby, McCarthy and Mr. Gilbert H. Hicks, to draw up rules and regulations for seed testing.

1897.—Galtee mare, owned by J. Gubbins, captured the English Derby in 2:44, Velasquez being second. The winner was sired by Kendal, a horse of no great prominence.

1897.—Wm. McKinley, President of the United States, serving four years and until re-elected, when he died at the hands of the assassin.

1897.—New era in rice culture. "Providence" rice dependent upon rainfall and hand plowing, succeeded by irrigation and thorough machinery methods.

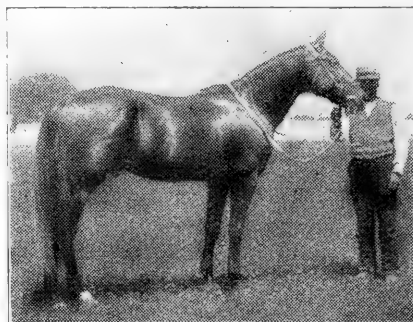
1897.—James Wilson, of Iowa, Secretary of Agriculture, appointed by President McKinley.

1897.—First commercial seed testing laboratory in the United States established by Mr. Frank Sempers at Blythedale, Md.

1897.—At the American Fat Stock Show the Hereford steer "Jack" was champion; a two-year-old, weighing 1,830 pounds.

1897, May 26th.—Handpress, the remarkable son of Hanover, in his two-year-old form, with 100 pounds up, set the four-and-one-half furlong record at 0:52 at the New York Jockey Club meeting.

1897.—Rex N. Blaxland imported pure-bred Angora goats into New South Wales, Australia, from the island of Tasmania—the pioneer flock of the modern Angora industry in New South Wales.



BROWN HAL, 2:12 $\frac{1}{2}$ —Son of old Tom Hal. Sire of Star Pointer, 1:59 $\frac{1}{4}$, and many other great pacers. From photograph by Schreiber. BROWN HAL was foaled in 1879 and bred by R. H. Moore, of Culleoka, Tenn.

1897.—Seed and plant introduction first undertaken by the Department of Agriculture on systematic scale.

1897, June.—Experiments in pasteurization of cream for the purpose of improving the keeping qualities of butter were conducted at Hesston Creamery, Newton, Kansas, by J. H. Monrad, Special Agent Dairy Division, United States Bureau of Animal Industry. Results favorable to pasteurization, but not clearly and distinctly so.

1897, July.—At this time the United States Department of Agriculture first began to distribute vaccine virus for the prevention of blackleg in cattle. Age for inoculation, six to twenty-four months.

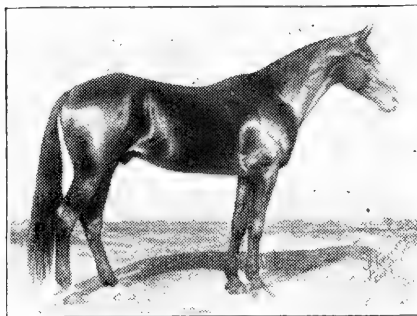
1897.—Lowest wheat, in April, 64 $\frac{1}{2}$ cents; highest of the year, in December, \$1.09.

1897, October 8th.—At Glen Falls, N. Y., John R. Gentry and Robert J., pacing as a team, against time, set the mark at 2:03.

1897, December 1st.—First auction sale of pure-bred hogs (Berkshires) at the St. Louis National Stock Yards.

1897, December 27th.—First meeting of the American Tamworth Swine Record Association. President, E. F. Miller, of Flint, Mich.; Secretary and Treasurer, E. O. Wood, also of Flint, Mich.; Directors, F. P. Smith, F. H. Rankin and J. J. Carton.

1897.—Star Pointer, bay horse, by Brown Hal, dam Sweepstakes, by Snow Heels, reduced the pacing mark to 1:59¼. This at Readville, Mass., August 28th.



STAR POINTER, 1:59¼.

1898, January 26th.—The National Live Stock Association organized in Denver, Colo. Officers: John W. Springer, of Denver, Colo., President; Hon. John M. Holt, of Miles City, Mont., Vice-President; George L. Goulding of Denver, Colo., Treasurer; and C. F. Martin, of Denver, Colo., Secretary.

1898, February 12th.—Judge Denny, the five-year-old son of Fresno, placed the turf record for two miles, running, at 3:26½. This was done at Oakland, Calif., the horse having 105 pounds up.

1898, March.—Organization of Continental Dorset Club with J. Fremont Hickman, President; Joseph E. Wing, Secretary. Purpose, registration and advancement of Dorset sheep.

1898, April 1st.—Opening of the modern and enlarged market for live stock at St. Joseph, Mo. President, G. F. Swift; Vice-President and General Manager, J. T. Donovan. Other Directors: Ernest Lindsey, O. M. Spencer, A. H. Veeder, Edward Morris and E. G. Vaughn.

1898, April 30th.—The steamship Waesland, of the International Navigation Company, left Philadelphia, carrying with other freights an experimental shipment of American eggs for sale in England. The eggs were sold in Manchester. The average price was 15 cents per dozen. Although the market was low at this time and the shipment was a financial failure, it was a pioneer movement, which led to good results. The shipment was made under the direction of the Dairy Division of the Bureau of Animal Industry.

1898, July 16th.—The running record for a mile and a half was made by Goodrich, a son of Patron, at Washington Park, Chicago, the time being 2:30¼.



A pair of Texas Angoras.

1898, August 30th.—The fastest authentic record made in the sale of range horses was established at the St. Louis National Stock Yards, where W. P. Callcott sold 1,200 head in 91 minutes. They were sold in car-load lots; but even so, the performance was phenomenal. The horses sold belonged to the Crow Indian Agency, Montana.

1898, August 31st.—The two-mile record for a horse race over hurdles was taken by Forget, the then excellent daughter of Exile, at Sheepshead Bay, N. Y., the time being 3:45 2-5. The race was run with 158 pounds up.

1898.—Public attention was first called to the utility of crude petroleum oil in road betterment through experiments made by the county of Los Angeles, in California, where six miles were oiled in that year under the direction of the Supervisors.

1898.—This was the biggest year in hog receipts at any market, Chicago receiving \$8,817,114 head.

1898.—Lowest wheat, in October, 62 cents; highest of the year, \$1.85, caused by the Leiter Corner, in May.

1898, December.—Enumeration of cold storage of apples at this time indicated 800 barrels in commercial warehouses, increasing by the year 1902 to 2,978,050 barrels held in winter storage.

1898.—J. W. Larnack's horse Jeddah the winner of the English Derby in the slow time of 2:17. A horse named Batt was second.

1898.—Cotton crop of season 1898-99 largest up to this time, being 11,275,600 commercial bales.

1899, May 20th.—In a trial against time at Oakland, Calif., the mare Lucretia Borgia, b.y imported Brutus, galloped four miles in 7:11. The next best time for the distance is 7:16½, made by The Bachelor, at Oakland.

1899.—Flying Fox, the great son of Orme, owned by the Duke of Westminster, captured the English Derby, making the distance in 2:42 4-5. Damocles ran second.

1899.—Mr. C. P. Bailey, of California, imported one Angora ram from Cape Town.

1899, October 3d.—The three-fourths of a mile running record was broken by Firearm, a son of Raymond d'Or, over the straight course at Morris Park, the time being set at 1:08¾.

1899, November 18th.—Kyrat, a three-year-old, by Teuton, ran two and one-half miles at Newport, Ky., in 4:24½.



National FARMER









and Stock GROWER



Published Monthly by The Farm Publishing Co.,
Chicago, Ill.

1899.—The National Farmer and Stock Grower, a monthly farm paper, established at the St. Louis National Stock Yards by Philip H. Hale.

1899, December.—Home butter-fat tests of Guernsey cows: First prize, Lily Ella, 7,240, 912.5 pounds butter; second prize, Lilyita, 7,241, 828.95 pounds butter; third prize, Countess Bishop, 7,869, 521. 71 pounds butter in one year.

1899.—Dunois, the five-year-old son of Florist, ran his record-breaking seven and one-half furlongs at Oakland Calif., in 1:32 $\frac{1}{4}$.

1899.—Lowest wheat, in December, 64 cents; highest of the year, in May, 79 $\frac{1}{2}$ cents.

1900.—In this year Col. T. C. Nye, who had a little home place in La Salle county, Texas, near Cotulla, and a windmill which which he pumped to irrigate a small home garden, obtained a few Bermuda onion seeds and planted them, and he raised the first crop of Bermuda onions in the United States. To George Copp, one of Col. Nye's neighbors, is due the credit of raising and shipping the first car of onions.

1900.—A valuable variety of long-staple upland cotton, called Sunflower, is the offspring of seeds shipped to an oil mill at Yazoo City, Miss., in this year, and purchased for planting by Marx Schaefer.

1900.—A bi-centenary exhibition of sweet peas held in London in July.

1900.—The Prince of Wales again won the English Derby, this time with Diamond Jubilee, a son of St. Simon. The time was 2:42, and Simon Dale was second.

1900.—Fourteen incubator patents granted in this year.

1900.—Split-wing distributing shaft improvement in gear of cream separators, invented by John Joseph Berigan, of Orange, New Jersey.

1900.—The United States Census reported 5,759,657 farms in the United States, an increase of 1,175,016 in ten years.

1900.—Center of United States population, twenty miles east of Columbus, Ind.

1900.—Coney, black gelding, by McKinney, dam Grace Kaiser, by Kaiser, paced a mile to wagon in a race in 2:05 $\frac{1}{2}$, reducing the mark of 2:10 $\frac{1}{4}$ made in 1899 by Arlington.

1900.—Pride of the North, a standard variety of corn, originated about this time by F. A. Warner, of Sibley, Ill.

1900.—Center of the number of farms in the United States, 110 miles east by south of St. Louis, in Wayne county, Illinois.

1900.—In a pacing record for teams, Charley B. and Bobby Hal broke all former records by going a mile in 2:13. The best previous record was made in 1892 by Belle Button and Thomas Ryder. Charley B. was by Octoroon, dam untraced, and Bobby Hal by the same sire, dam by Royal George, Jr.

1900, February 27th.—At New Orleans, La., Julius Caesar, a five-year-old, ran a mile and seven-eighths in 3:19, the greatest record for the distance.

1900, June.—Organization of the Illinois Seed Corn Breeders' Association.

1900, July 21st.—Ovimar, a six-year-old, carrying 109 pounds, covered the mile track at Washington Park, Chicago, in 1:38.

1900.—The fastest mile trotting record to wagon against time was made by The Abbot, by Chimes, dam Nettie King, by Mambrino King. It was 2:05 $\frac{1}{4}$, and reduced the record of 2:07 formerly held by Lucille.

1900, August.—W. D. Flatt, Canadian breeder of Shorthorns, sold fifty nine head at Chicago, Ill., for an average of \$793.40, the top price being \$2,600.

1900, August 4th.—At Brighton Beach, N. Y., Ethelbert established a record of 3:49 for two miles and a quarter. She carried 124 pounds.

1900.—After six years of uninterrupted supremacy for Alix, The Abbot broke the trotting record, establishing a mark of 2:03 $\frac{1}{4}$ at Terre Haute, Ind., September 25th. He was sired by Chimes, and his dam was Nettie King, by Mambrino King.

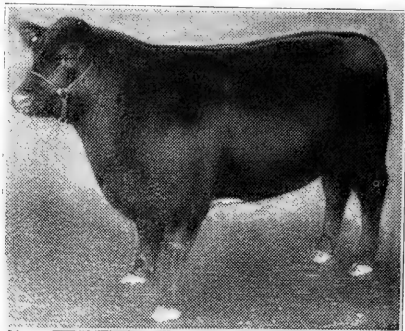
1900.—Paris Horse Exposition, September 1st to 10th. Grand champion carriage horse Sir Walter Glibbey's Hackney stallion, Hedon Squire. Champion Percheron stallion, Dunham, Fletcher & Coleman's Castelar, bred by M. Edward Perriott.

1900, October 13th.—The famous mare Ethelbert negotiated a mile and three-quarters at Morris Park, N. Y., in 2:58 $\frac{1}{2}$. This record is held jointly with Latson, who established the same time a year later; but the performance of Ethelbert is the more meritorious in that she carried 126 pounds against Latson's 95 pounds.

1900, November.—The Hapgood Plow Company, of Alton, Ill., commenced the manufacture of the (M. T.) Hancock Adjustable Revolving Disc Plow.

1900, December 1st.—Permanent Intercollegiate Live Stock Judging Contest instituted, the reward being a memorial called The Spoor Trophy, to be kept by winning teams from year to year, but not to become the property of any college. The trophy was offered by Mr. J. A. Spoor, President of the Chicago Union Stock Yards, and is a great incentive to students in studies of stock judging.

1900.—Lowest wheat in January, 61 $\frac{1}{2}$ cents; highest, in June, 87 $\frac{1}{2}$ cents.



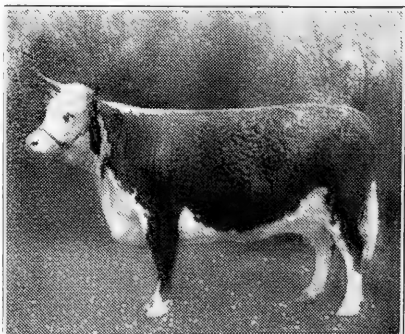
ADVANCE—Grand champion steer.

1900, December.—Aberdeen-Angus steer Advance, champion of International Exposition, sold at \$1.50 per pound on foot.

1900, December.—Champion load of cattle at Chicago International Exposition sold at \$15.50 per 100 pounds, the highest car-load price on record.

1900, December 1st to 8th.—First Chicago International Live Stock Exhibition. W. E. Skinner, General Manager.

1900, December 4th.—At Chicago, the famous Hereford bull March On, 13th, sold at auction by Van Natta & Son, of Fowler, Ill., bought by Moffat Bros. at \$3,500.



DOLLY, 5th—Famous Hereford cow.

1900, December 5th.—At Chicago, the Hereford cow, Dolly, 5th, 71,988, and calf, bred by John Hooker, of New London, Ohio, and owned by Clem Graves, of Bunker Hill, Ind., sold to C. A. Jamison, of Peoria, Ill., at auction, for \$3,150, being the record price for any Hereford cow to that date.

1900.—At the Paris Universal Exposition, Samuel Haugdahl, of New Sweden, Minn., U. S. A., won the grand prix d'honneur for a **tub of butter** exhibited at the Special Show held in May. This was the only instance during the entire Exposition in which the highest honor was awarded to an individual exhibitor for a dairy product.

1900.—First **American Royal Show** at Kansas City. Grand sweepstakes steer, Old Times, 94,034, pure-bred Hereford, exhibited by T. F. B. Southam, of Chillicothe, Mo.

1900.—The heaviest total of horses and mules ever attracted to any one point up to this time were marketed at St. Louis, the total for the year being 178,921 head.

1900. December 11th and 12th.—K. D. Armour and James A. Funkhouser sold 106 **Herefords at auction** at Kansas City for an average of \$351.60.

1900.—Sir John Bennett Lawes, great **agricultural experimenter**, died at Rothamsted, England, at the age of 86 years.

THE TWENTIETH CENTURY.

1901. January 25th.—At Kansas City Clem Graves, of Bunker Hill, Ind., sold the three-year-old **Hereford heifer** Carnation, 77,764, sire Acrobat, for \$3,700, to J. C. Adams, of Moweaqua, Ill. Average of 200 Herefords at this sale nearly \$380 per head.

1901. January.—In an official test the Holstein-Friesian cow Lillith Pauline De Kol, 43,434, owned by H. D. Roe, of Augusta, N. J., made 28,236 pounds of butter, 80 per cent. fat in seven days. She gave in this time 653.4 pounds of milk which averaged 3.48 per cent. fat. This cow made the largest official record of any **Holstein-Friesian cow** tested to date.

1901. February 12th.—Sale of **Berkshire swine** at Biltmore, N. C. Fifty-one head averaged \$102, the top price being \$250.

1901. March.—William Harris, of West Smithfield, Essex, England, killed a two-and-one-half-year-old **Jersey red boar**. Live weight, 1,610 pounds; dressing 1,337 pounds; 2½ feet across loin; 2½ feet across hams; 9 feet in girth; 9 feet tip of nose to end of tail.

1901. March 6th to 8th.—Dispersion sale of **Aberdeen-Angus cattle**, herd of Charles Escher & Son, of Botna, Iowa, at Chicago. 117 cows averaged \$483.05; twenty-six bulls averaged \$465.95; and 143 head averaged \$479.95. Top sales: Female, Imp. Krivina, 28,475; \$1,700; bull, Orin of Long Branch, \$1,300.

1901. March 12th and 13th.—At South Omaha, Neb., T. R. Westrope & Son sold eighty-one **Shorthorns** for an average of \$454.85 per head. The sale included Sweet Violet, 2d, by Lavender King, and female calf, sold to G. M. Casey, of Clinton, Mo., for \$3,705, the record price for a Scotch Shorthorn female.

1901. April 5th.—Combination sale of **Shorthorns** at Chicago, Ill. Forty-six head averaged \$719.13. Victoria of Hill Farm, 6th, and female calf, consigned by C. B. Dustin & Son, of Summer Hill, Ill., sold to Frank Bellows, of Maryville, Mo., for \$2,100.

1901. April 12th.—**Jersey cow**, Miss Thankful, 2d, 131,969; test seven days, April 6th to 12th, 24 pounds 4½ ounces butter; milk, 275 pounds. Owned by John A. Skannal, of Sligo, La.

1901. April 18th and 19th.—Sale of **Holstein cattle** at Syracuse, N. Y., by Clarence F. & Will C. Hunt. Average of 128 cattle, big, little, old and young, \$101.60. The twenty-three official record cows averaged \$179.

1901. May.—Imp. Missie, 165, **Shorthorn heifer**, sold at \$2,200 at the auction of C. L. Gerlaugh, of Osborn, Ohio.

1901. May 15th.—At Greenville, Ohio, **Polled Durham** sale of Stewart & Martz included the bull Cambridge Lad, sold at \$1,000, and the cow, Bracelet of Stillwater, sold at \$1,005, both to F. Hines, of Indianapolis, Ind.

1901. May 22d.—At Chicago, the **Hereford cow**, Dolly 2d, 61,799, John Hooker, breeder and owner, sold at auction with heifer calf for \$5,000 to N. Y. Bowen, of Delphi, Ind.

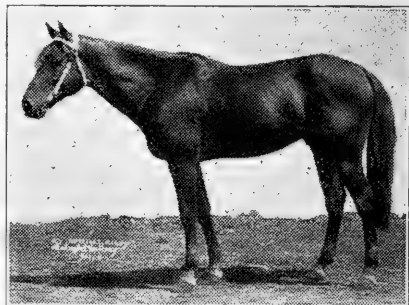
1901. May 23d.—Blue Girl, as a two-year-year-old, took the **record for a mile and a sixteenth** in 1:44¾ at Morris Park, N. Y.

1901. May 30th.—At Coopersburg, Pa., T. S. Cooper sold 108 head **Jersey cattle** at an average of \$157.75. The bull Golden Mon Plaisir, 59,936, son of Golden Lad, sold to H. N. Higginbotham at \$3,500. The cow, Golden Rosebay, 157,333, sold to Biltmore Farms for \$2,775.

1901. June 4th.—At the combination sale George E. Ward, of Hawarden, Iowa, sold the **Shorthorn Duchess of Gloucester**, with bull calf at side, for \$2,500 to Brown & Randolph, of Indianola, Iowa. Average of sixty Shorthorns at this sale, \$748.33.

1901. June 12th.—Sale of **Red Polled cattle** at Fairfield, Neb., by S. McKelvie & Sons. The cow, Prairie Blossom, 12,803, sold to G. W. Coleman, of Webster City, Iowa, for \$1,005. Average for thirty-seven head, \$257.03.

1901. June.—The **mile running record** over a circular track was broken by Brigadier at Sheepshead Bay, N. Y., the distance being negotiated in 1:37 4-5.



CRESCEUS, 2:02¼.

1901.—On July 26th, Cresceus took the **trotting record** at 2:02¼ at Cleveland, Ohio, and on August 22d further reduced this mark to 2:02¼. This was at Columbus, Ohio. The first quarter was in 29¾; the half, 59¾; three-quarters in 1:30¾. This was at the time the world's trotting record; at this time—in 1906—it is the stallion record. Cresceus is a chestnut horse by the great Robert McGregor, dam by Mambrino Howard, and in all his record-breaking performance was driven by his owner, Geo. H. Ketcham.

1901. August 7th.—At Chicago, Geo. Harding & Sons, of Waukesha, Wis., sold forty-three **Shorthorns** at an average of \$656.85.

1901. August 15th.—Cresceus defeats The Abbot in a **famous trotting contest** at Brighton Beach. The time was 2:03¾, making world's mile trotting record in a race.

1901. August 22d.—At Columbus, Ohio, Cresceus lowered the **trotting record** to 2:02¼.

1901.—In this year Hon. F. D. Coburn, Secretary of the State Board of Agriculture of Kansas, issued a book entitled "Alfalfa," containing directions for planting, growing and harvesting this excellent forage crop, resulting in immense increase in alfalfa acreage in the United States.

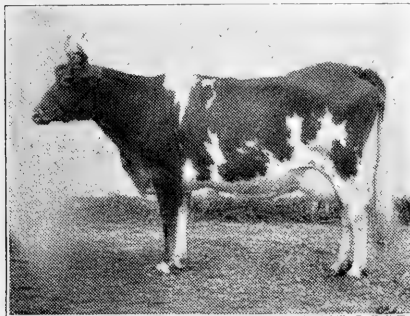
1901. September 5th.—The **best record** ever made for a mile and seventy yards was established by Jiminez, a three-year-old, carrying 101 pounds. It was 1:42½, and was made at the Harlem track, Chicago.

1901. October 2d.—McChesney, in his two-year-old form, established the six and one-half furlong **running record** of 1:18 4-5 at Harlem Park, Chicago.

1901. October 3d.—At Newton, Iowa, E. S. Donahey sold fifty-four **Shorthorn cattle** for an average of \$646.35, including the cow, Early Bud, 2d, at \$1,500, and nine other females upward of \$1,000.

1901.—The **English Derby** was won by an American, Wm. C. Whitney, with the sensational horse, Volodyovskii, a son of Florizel, II. All records for time were broken, the distance being covered in 2:40 4-5.

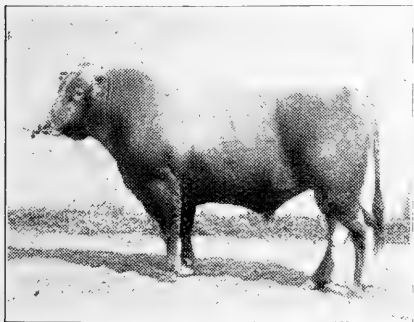
1901, October 25th.—At Memphis, Tenn., Little Boy, by Kenton, dam Jenny, by Longfellow, broke the **mile pacing record** to wagon, against time, putting the mark at 2:01 1/2. The former record, 2:03 3/4, was made by Bumps in 1889.



GUERSEY COW—MARY MARSHALL. This distinguished cow was the winning cow in the Pan-American model dairy herd, 1901. The six-months' record was 5,611 pounds of milk; 5.36 per cent. butter-fat; 354.26 pounds of churned butter. The profit in butter production was \$59.43, the next highest being \$51.58.

1901, November 3d.—Mary Marshall, 5,601, winning cow in **butter production** in Pan-American model dairy herd. Record for six months, 5,611 pounds milk, 5.36 per cent. butter-fat, 303.13 pounds butter-fat, equal to 354.26 pounds churned butter. Profit in production of butter-fat, \$59.43 in six months.

1901, November 3d.—Awards in the Breed Test in Pan-American model dairy. Prize for **net profit in butter-fat** won by Guernseys by a net profit of \$4.66. The prize for net profit in churned butter won by Guernseys by net profit of \$5.86. The prize for net profit in total solids won by Holsteins by a net profit of \$26.44. The profit in total solids and gain in live weight won by Holsteins by net profit of \$31.53.



BROWN SWISS BULL—DUKE OF RIVER MEADOW. Highly representative bull of this fine breed of dairy cattle and first-prize winner at the Pan-American Show of 1901. The Brown Swiss cattle are very handsome in appearance, not unlike the Jerseys, but distinctly larger and with more claims to beef qualities.

1901.—**Short corn crop** in the United States; yield, 16.7 bushels per acre. Total, 1,552,520,000 bushels; smallest crop since 1894.

1901, November 7th.—At Chicago, Ill., W. D. Platt, of Hamilton, Canada, sold forty-five **Shorthorn cattle** for an average of \$1,123.22. Imported Cicely, the Queen of England heifer, sold to J. G. Robbins & Son, of Horace, Ind., for \$5,000. The bull, Lord Banff, sold to Geo. E. Ward, of Hawarden, Iowa, for \$5,100.

1901, November 14th and 15th.—Breeders' sale of **Holstein cattle** at Syracuse, N. Y. Average for the eighty-five head, \$121.55. W. C. Hunt, of Liverpool, N. Y., manager.

1901, November 20th and 21st.—First **Hereford cattle sale** at East St. Louis by T. F. B. Sotham, of Chillicothe, Mo.

1901, December 2d.—The Holstein cow, Mercedes Julips Pieterje, completes seven-day record of 29 pounds 5.7 ounces of butter at South Side Farm, White Bear Lake, Minn.

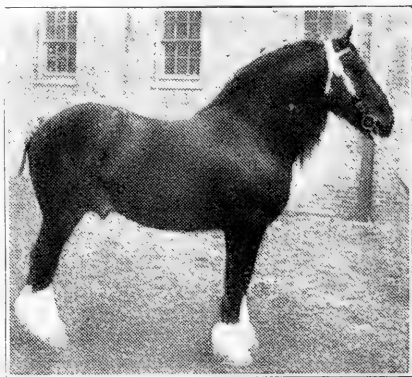
1901, December.—**Home butter-fat tests** of Guernsey cows: First prize, Glenwood Girl, 6th, 9.113, 667.5 pounds butter; second prize, Primrose Tricksey, 7.236, 592.6 pounds butter; third prize, Gipsy of Racine, 9.639, 509.9 pounds butter in one year.

1901, December 6th.—**Galloway cattle** sold at Chicago, Ill.; thirty-three head average \$285. Sale included Imp. McDougall, 4th, of Tarbreoch, champion Scottish bull, sold to O. N. Moody, of Atlanta, Mo., for \$2,000.

1901, December 9th.—Grand champion at International Live Stock Show, The Woods Principal, **Hereford steer**, 1,645 pounds at twenty-five months, s'd by John Letham for Geo. P. Henry, of Goodenow, Ill.

1901.—Great **wheat crop** in the United States, 748,460,000 bushels; harvested while the corn crop was drying up.

1901.—**Lowest wheat**, in July, 63 1/2 cents; highest of the year, in December, 79 1/2 cents.



BLAISDON PLUTO—Shire stallion. Owned and exhibited by Trumans' Pioneer Stud Farm, Bushnell, Ill. Champion Shire stallion, any age, at the Chicago International Exposition, 1901.

1902, January 7th.—Record price for **Hereford bulls** broken by sale of bull "Perfection" for \$9,000 by Thomas Clark, of Beecher, Ill., to G. H. Hoxie, of Thornton, Ill.

1902, January 9th.—A. P. Nave, of Attica, Ind., sold **Percherons** at auction. The top price was \$1,630, paid by A. B. Puterbaugh, of Milledgeville, Ill., for the stallion Abo, 22,686. The average was \$469.25 for forty-one head.

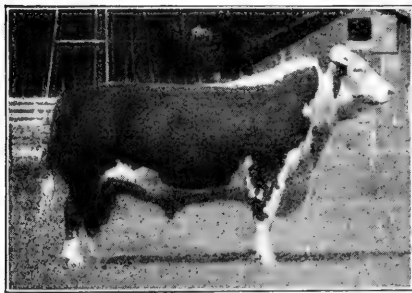
1902, January 28th to 30th.—A sale of **Herefords** under management of T. F. B. Sotham, held at Kansas City, resulted in an average of \$373 for 113 females and \$292 for seventy-one bulls. The top price, \$3,995, was paid by the Wabash Stock Farm Company for the Improver bull Good Cross, 120,180. The average of 154 head was \$341.70.

1902.—In Mrs. Alice Morse Earle's volume on Colonial Gardens, published this year, she says that the **largest apple tree** in New England is at Cheshire, Conn., its trunk measuring, one foot above all root enlargements, thirteen feet eight inches in circum-

ference. Its age is traced back 150 years. She also says that at the old Rhode Island home of Bishop Berkeley, who died in 1753, the apple trees of his day are yet standing.

1902, January 30th and 31st.—Sale of **Poland-China swine** by Winn & Mastin, of Mustin, Kas. 105 head sold for an average of \$124.27.

1902, February 4th and 5th.—During **Aberdeen-Angus cattle** sale at Chicago, Ill., the average for twenty years was broken, eighty-two head selling for an average of \$674.45. This included bulls and females.



ONWARD, 4th—Famous Hereford bull.

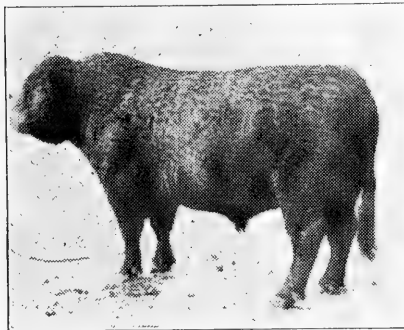
1902, February 5th.—"Blackcap Judy," the famous **Aberdeen-Angus yearling heifer**, was sold for the record price of \$6,500. C. H. Gardner, of Blandinsville, Ill., was her owner, and M. A. Judy & Son, of Williamsport, Ind., her purchasers.

1902, February 5th.—New high mork in prices of **Aberdeen-Angus bulls** established. "Prince Ito," sold by M. A. Judy & Son, of Williamsport, Ind., to E. R. Pierce, of Creston, Ill., for \$9,100.

1902, February 15th.—Sale of **Percheron horses** by J. W. & J. C. Robinson, of Wichita, Kas. Twenty-three head made an average of \$468.70.

1902, February 25th to 27th.—Combination sale of **Hereford cattle** at Kansas City. Top price of sale, Mrs. Cross' bull, Royalty's Java, sold for \$650. The bull average, thirty-nine head, was \$208.45. The female average was \$318.15 for ninety-six head. Average for 135 head, \$286.45.

1902.—Boston Work Horse Parade Association held in this year, and the pioneer in holding work horse parades in this country.



FAT RYAN OF RED CLOUD—Champion Galloway bull at the Chicago International Show, 1906.

1902, February 28th and March 1st.—Dispersion sale of **Hugh Paul Galloway cattle** at South Omaha. The twenty-four bulls averaged \$208.10, and eighty-nine females \$178.60. The 113 head made a general average of \$194.85.

1902.—Ard. Patrick, a son of St. Florian, owned by John Gubins, won the **English Derby**, Rising Glass being second. The time was 2:42 1/4.

1902, March 6th and 7th.—Imp. Spicy Clara, **Shorthorn yearling heifer**, International prize winner, sold to Geo. Harding & Son, of Waukesha, Wis., for \$1,500. At a Chicago sale of Shorthorns the general average was \$499.80 for eighty-nine head.

1902, March 8th.—At Chicago, **Red Polled cattle** sale by A. F. & J. F. Dobler, of Girard, Pa. Top price, \$600, for the cow Mayflower, 2d. Average for fifty-seven head, \$189.20.

1902, March 18th.—Dispersion sale of **Shorthorn cattle** at Kansas City by Col. W. R. Nelson—fifty-six head—average, \$340.35. Top price for Imp. Lavender Lilly, sold to D. R. Hanna for \$1,600, next price being \$1,500 for Imp. Miranda and cow calf by the same buyer.

1902, March 18th and 19th.—Combination **Aberdeen-Angus cattle** sale at Omaha by Chas. Escher, Jr. Average for 111 head, \$213. Top price, \$1,110 for Isabella, 4th, of Millsland, 21,891, and female calf, paid by E. Reynolds & Son, of Prophetstown, Ill., to E. T. Davis, of Iowa City, Iowa.

1902, March 24th.—Sale of forty-one **Shorthorns** by E. R. Stangland, of Marathon, Iowa. Average, \$485 per head. Top price, \$1,775, for 20th Linwood Victoria and cow calf, paid by C. C. Bigler & Son, of Hartwick, Iowa.

1902, March 25th.—**Shorthorn cattle** sale by H. F. Brown, of Minneapolis, Minn. Average of thirty-five head, \$750. Top sales: Imp. June and bull calf, \$1,550, paid by W. H. Dunwoody, of Minneapolis, Minn.; bull Royal Banner, 150,993, bought by W. O. Carpenter, of Pukwana, S. D., at \$1,505.

1902, March 25th and 26th.—**Hereford cattle** sold by T. E. Sotham and others. Average for 148 head, \$323.25. Top price, \$1,650, for Corrector cow Galatea, 107,723, bought by G. E. Ricker, of Ashland, Neb.

1902, March 27th.—Hector Cowan, Jr., of Pauliana, Iowa, sold forty-nine **Shorthorns**, averaging \$512.05. Top price paid by John Rasmus, of Lake City, Iowa, for the cow Dalmeny Princess, 9th.

1902.—**Cattle in Ireland**, 4,782,221 head, the largest number known in that country.

1902, April 1st.—**Farmers' and Stockmen's Business Directory** issued by Philip H. Hale, St. Louis, Mo.

1902, April 3d.—Geo. M. Woody sold fifty-four **Shorthorn cattle** for an average of \$299.10. Top price, \$1,750, paid by F. A. Schaffer & West Bros., of Estherville, Ia., for Imp. Lily of the Valley, 17th.

1902, April 14th.—**Shorthorn sale** at Chicago by George Bothwell, of Nettleton, Mo., and fifty-four head averaged \$479.50. Notable sales included the bull Nonpareil of Clover Blossom, 153,672, at \$1,710, paid by Geo. Harding & Son, and the bull Nonpareil Hero, 170,793, at \$1,710, bought by H. Hagenfeldt, of Storm Lake, Ia.

1902, April 17th.—Sale of **Shorthorns** by G. W. Brown & Randolph Bros., of Indianapolis, Ia. The average for forty-nine head was \$384.30. Notable sales included Victoria of Village Park, 3d, and bull calf, bought by N. A. Lind, of Rolfe, Ia., for \$3,500, and Imp. Gazelle, sired by Royal Star, for \$2,105, paid by Bigler & Son, of Hartwick, Ia.

1902, April 29th and 30th.—At Syracuse, N. Y., W. C. Hunt's second semi-annual sale of **Holstein cattle**. Average of ninety-nine head, \$103.

1902, May 1st and 2d.—At Sioux City, Ia., initial combination sale of **Herefords**. The 113 head averaged \$229.40.

1902, May 3d.—At Sioux City, Ia., combination sale of **Shorthorns**. Average, \$366.80 per head. Notable sales included Imp. Dalmeny Regina, 5th, sold by C. C. Bigler & Son to Henry Weiss, of Westphalia, Kas., for \$1,375, and May Queen, with cow calf, bought by John Rasmus, of Lake City, Ia., for \$1,825.

1902.—Great **corn crop** of the United States; officially, 2,523,648,312 bushels, from 93,043,613 acres.

1902, May 13th and 14th.—Combination sale at Indianapolis, Ind. **Herefords**, sixty-two head, sold for an average of \$392.35, including Miss Java, 2d, 94,200, and cow calf, consigned by Mr. Daugherty, of Wabash, Ind., and sold to Ed. Hawkins, of Earl Park, for \$3,500. **Shorthorns**, sixty-four head, averaged \$422, including 55th Duchess of Gloster, consigned by E. E. Souers, of Warren, Ind., and bought by Geo. Harding & Son, of Waukesha, Wis., for \$2,105.



GENTRY LARS—A famous Hereford bull. Prize winner at many shows. Stock bull at Grandview Herefords. Owned by C. G. Comstock & Son, Albany, Mo.

1902, May 17th to 21st.—**Ohio Shorthorn Sales**: H. G. Walker, of New Madison, thirty head; average, \$107.70; E. S. Kelly, of Yellow Springs, thirty-six head, average, \$590.40; top price, \$1,625, paid by W. L. Wood, of Williamsport, O., for Imp. Missie, 158th; C. L. Gerlaugh, of Osborn, O., thirty-three head; average, \$610; top price, the bull Master of the Ring, 171,376, sold to J. T. Ryan & Son, of Irwin, Ia., for \$1,705; W. I. Wood, of Williamsport, O., forty-four head; average, \$350; top price, female Imp. Proud Fancy, sold at \$2,050 to W. T. Miller & Sons, of Winchester, Ind.; top-priced bull, Choice of the Ring, sold to Brown & Randolph Bros., of Indianola, Ia., for \$1,550.

1902, May 22d and 23d.—Combination sale of **Herefords** by C. A. Jamison, of Quincy, Ill., and others at Chicago. Eighty-three head averaged \$323. Top price was \$2,100, bid for Lady Wiltona, a daughter of Dale, by Ed. Hawkins, of Earl Park, Ind.

1902, May 28th.—**Shorthorn cattle sale** at Morning Sun, Ia. R. G. Robb & Son's average \$386.40 for twenty-eight head; A. Alexander's average for twenty-five head \$526, including the cow Mary of Bluff View, sold to Korns & Lee, of Hartwick, Ia., for \$1,230.

1902, May 30th and 31st.—Linden Grove, sale of **imported Jerseys** by T. S. Cooper, of Coopersburg, Pa. The 168 head averaged \$349.60. The sale included the champion bull Flying Fox, sold to T. W. Lawson, of Boston, Mass., for \$7,500. The highest price for a female was \$3,100, for the cow Lady Fontaine's Rosette, 162,120, for \$3,100.

1902, June.—**Straight Texas steers** sold on the Chicago market at \$7.65 per 100 pounds, the record price. Shipped by Ed. Farmer, of Fort Worth, Tex.

1902, June 3d.—N. A. Lind, of Rolfe, Ia., sold fifty-five **Shorthorns** for an average of \$766.30. Top price, \$3,800, paid for the cow Red Crest, sire Imp. Scottish Chief, sold to C. C. Bigler & Son, of Hartwick, Ia.

1902, June 5th and 6th.—**Shorthorn cattle sale** by C. C. Bigler & Son, of Hartwick, Ia. The 115 head sold for \$94,715, an average of \$823.60 per head. The sale included thirty-one head at \$1,000 to \$2,500, not including the cow Wild Eyes, 61st, sired by Airdrie Duke of Hazelhurst, bought for \$3,040 by G. W. Brown & Randolph Bros., of Indianola, Ia., for \$3,040.

1902, June 10th and 11th.—At Chicago, combination **Angus cattle sale**. 101 head averaged \$312.10. Top prices: \$2,000 paid by Silas Igo, of Palmyra, Ia., for the cow Belle

Bloomer, 2d, 23,218, and Edgewood Belle, 22,260, both consigned by Cantine Bros. & Stevenson, of Holstein, Ia.

1902, June 18th.—Indianapolis combination sale of **Polled Durham cattle**. Average of fifty-two head, \$424.70. Top price, cow Golden Heather, sold to J. F. Jennings, of Streator, Ill., for \$3,525.

1902, July 4th.—Major Daingerfield broke the **record for a mile and five-eighths** over the track at Sheephead Bay, N. Y., in 2:47 3-5. He had 123 pounds up.

1902, July 5th.—At Brighton Beach, N. Y., Gold Heels established a new **Derby record** of 2:03 4-5, the fastest over a circular track.

1902, July 30th.—Bonnhert captured the **mile and one-eighth running record** by going the distance in 1:51 at Brighton Beach, N. Y. The record of 1:51 1-5 was formerly held by Watercure.

1902, July 30th.—**Sale of Shorthorns** by A. Chrystal at Marshall, Mich. Top price, \$1,500, for Imp. Lady Bell, 3d, and female calf, bought by E. G. Stevenson, of Detroit, Mich. Average for sixty-seven head, \$266.95.

1902, August.—**Native beef cattle** sold at Chicago up to \$9.00 per 100 pounds.

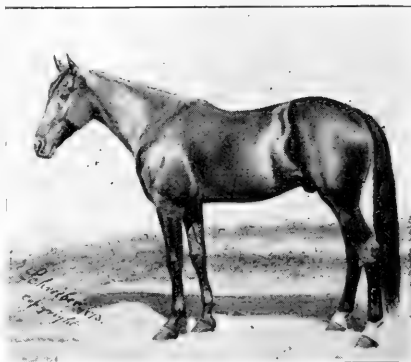
1902, August 3d.—**Pueblo (Colo.) Stock Yards** opened for business. The officers are as follows: C. G. Warner, President, of St. St. Louis, Mo.; N. Douthitt, Vice-President and General Manager, of Kansas City, Mo.; G. P. Robinson, Traffic Manager; W. H. Burnett, Superintendent, of Pueblo, Colo.

1902, August 5th.—**Brady Union Stock Yards** at Atlanta, Ga., organized. President, T. B. Brady; Vice-President, John Oliver; Secretary, J. M. Brady. Opened for business November 10th, 1902.

1902, August 13th.—**Shorthorn sale** at Hamilton Stock Yards, Canada. The fifty-eight head averaged \$425.43. Top sale, the Imp. Wanderer's Last, consigned by Captain T. E. Robson, of Ilderton, Ontario, and sold to Geo. Bothwell, of Nettleton, Mo., for \$2,005.

1902, August 16th.—Lord Derby, bay gelding, by Mambrino King, dam Claribel, by Almant, Jr., established the **mile trotting record** to wagon in a race of 2:05 3/4, beating the previous record of 2:10, held jointly by John A. McKerron and The Monk.

1902, August 18th.—The Musketeer negotiated seven-eighths of a mile at the Saratoga, N. Y., track in 1:25. This was the **best running record** over a circular track.



ELECTIONEER — FAMOUS TROTTER SIRE. By Hambletonian. Sire of Arion, 2:07 3/4; Sunol, 2:08 3/4; Palo Alto, 2:08 3/4; and many others with fast records. From photograph picture taken in 1873 by Schreiber & Sons, Philadelphia, Pa.

1902, August 21st.—At a sale of **Poland-China swine** by Shallenburger & Cox, of Ohio, Mr. L. Lukens, of Disco, Ill., bought the five-year-old boar, Big Chief Tecumseh, 2d, for \$2,100.

1902, August 24th.—Lou Dillon trots the **first mile** in 2:00 at Readville, Mass.

1902, August 27th and 28th.—**Hereford cattle** sale at Des Moines, Ia. The seventy-two head averaged \$218. Top price of the sale, \$540.



HEATHERBLOOM—The greatest jumper of them all, with Donnelly up. Copyright photo by Schreiber in 1902.

1902, September 1st.—The **fastest running time** for a mile and three-sixteenths was made at Chicago by Scintillant, Ill., the mark being 1:57 2-5.

1902, September 2d and 3d.—Sale of **Hereford cattle** at Hamline, Minn. The sixty-one head sold for an average of \$225.

1902, September 4th.—Sale of **Shorthorns** at Hamline, Minn. Forty-eight head averaged \$450.50. Top price, \$1,500, for N. A. Lind's bull Fearless Victor, 174,014, bought by John Lister, of Conrad, Ia.

1902, September 4th.—First public sale of **Berkshires** at the Ohio State Fair. Average of forty-four head, \$28.75; top price for boar, \$70; for sow, \$100.

1902, September 9th.—**Shorthorn sale** by Mrs. Virginia C. Meredith and J. G. Robbins & Sons at Cambridge City, Ind. Average of thirty head, \$419.65. Top price, \$1,200, for Imp. cow Maggie, 12th, sold to E. E. Souers, of Warren, Ind.

1902, September 16th.—Extraordinary sale at Indianapolis, Ind., of **Herefords** owned by Clem Graves, of Bunker Hill, Ind. The forty-three head averaged \$1,007. Top prices include the bull Crusader, \$6,596, by Ed. Hawkins for \$12,000. The cow Dolly, 2d, 61,799, also bought by Ed. Hawkins for \$7,000.

1902.—On September 29th, the **sheep receipts** at the Chicago Union Stock Yards were 59,362 head, breaking all previous records for a single day's run at any market.

1902, October 7th and 8th.—At Chillicothe, Mo., T. F. B. Sotham inaugurated a series of high-class **stock cattle auction sales** by selling 2,000 head of young cattle from the Panhandle of Texas.

1902, October 9th.—**Shorthorn sale** by Charles E. Ladd, of North Yamhill, Ore., at Spokane, Wash. Average for thirty-nine head, \$330.25. Top price, \$1,000.

1902, October 14th to 16th.—**Shorthorn combination sale** at Victor, Ia. Average for 105 head, \$379.20. Top price, \$1,140, for cow Victoria of Hill Farm, 8th, consigned by C. C. Bigler & Sons, and sold to E. S. Kelley, of Yellow Springs, O.

1902, October 15th.—Sale of **Polled Durhams** at Indianapolis, Ind. Average for forty head, \$128.90.

1902.—During the week ending October 18th, 162,459 head of **sheep** arrived at the Chicago Union Stock Yards, the largest on record for a similar period.

1902, October.—**Western grass range cattle** sold at \$7.40 per 100 pounds; record price.

1902, October 16th and 17th.—Combination sale of **Hereford cattle** at Indianapolis, Ind. Average for 104 head, \$497.05. Top price, \$1,500, paid by S. H. Godman, of Wabash, Ind., for the cow Beryl, 102,541, consigned by F. A. Nave, of Attica, Ind.

1902, October 20th to 25th.—**Berkshire swine** at auction at Kansas City. Average of sows, \$58.60; average of boars, \$48.60; average of eighty-seven head, \$53.70.

1902, October 21st.—At Memphis, Tenn., Cresceus placed the **two-mile trotting record** at 4:17 in his trial against Onward Silver's mark of 4:28 1/2.

1902, October 21st and 22d.—Combination sale of **Herefords** at Kansas City, Mo. The average of ninety-six head was \$304.40. Top price, \$1,005, for Columbus, 29th, consigned by Denton Gabbert, of Dearborn, Mo., and bought by H. McEldowney, of Chicago Heights, Ill.

1902, October 21st and 22d.—**Aberdeen-Angus cattle** sale at Kansas City, Mo. Average of ninety-eight head, \$176.10.

1902.—All leading live stock markets broke the **one-day cattle receipt record**. Chicago's total on December 1st was 36,553 head. The big day at Kansas City was September 16th, when 29,216 head were received. Omaha's largest total was on September 29th, when 13,228 head arrived; while the St. Louis record was 12,193 head, made September 23d.

1902, October 23d.—Sale of **Galloway cattle** at Kansas City, Mo. Average for forty-seven head, \$153.60. Top price, \$1,115, paid by O. H. Swigart, of Champaign, Ill., for the cow Dorthea, 18,673, consigned by C. N. Moody, of Atlanta, Mo.

1902, October 23d and 24th.—**Shorthorn cattle** sale at Kansas City, Mo. Average of sixty-six head, \$247.50.

1902, October 28th.—At Memphis, Tenn., Direct Hal and Prince Direct, both sons of Direct, 24,113, **paced a mile** as 2:05 1/4 against time and set a new mark of 2:05 1/4. The record prior to this was 2:08, made by John R. Gentry and Robert J. in 1897.

1902, October 28th and 29th.—**Red Polled cattle** sold at Chicago by Captain V. T. Hills, of Delaware, O. Average for ninety-two head, \$283.30. Top-price female, Popsey, 3d, sold for \$1,125 to C. S. Carr, of Elm Grove, W. Va. Top-price bull, Popular, 856, sold to J. H. Smith, of Chillicothe, O., for \$1,200.



THE INTELLIGENT HEAD OF MOKO—Famous trotting stallion, sire of futurity winners.

1902, October 21st to 25th.—Sale of **Poland-China swine** at Kansas City, Mo. The boar average was \$58.70; sows, \$61.50; average of 161 head, \$60.50.

1902, September 20th.—Sale of **Percheron horses** by H. G. McMillan, of Rock Rapids, Ia. Mare average, \$267.40; stallion average, \$630.70; average of forty-two head, \$452. Top price for a stallion, \$1,175.

1902, October 31st.—The stallion **Creseus** trots two miles in 4:17, establishing a world's record.

1902.—**Lowest wheat**, in August, 68½ cents; highest, in September, 95 cents.

1902, October 31st.—At Los Angeles, Calif., Zambira, bay gelding by McKinney, dam by Fairmount, broke the **five-mile trotting record** in a race against four other horses. He brought the time down to 12:24. It formerly was 12:30¾, the record of Bishop Hero.

1902, November.—**Fort Worth Stock Yards** formally opened for business with support of modern packing houses. President, J. Ogden Armour; Vice-President, E. F. Swift; Secretary, O. W. Matthews; General Manager, W. B. King.

1902, November 5th and 6th.—**Aberdeen-Angus** combination sale. Average of seventy-nine head, \$387.40. Top price, \$1,050, for Imp. cow Pride of Aberdeen, 167th.

1902.—As a test of endurance, in the summer of 1902 Colonel Baskakov, of the Russian Headquarters Staff, undertook to ride from St. Petersburg to Odessa, a distance of 1,716 versts (1,128 miles). Using two horses, an English bred one and an Arab, alternately, he performed the journey in twelve days, an average of ninety-four miles per diem, and brought in both mounts in good condition, though neither had been subjected to any preparatory training for the undertaking.

1902, November 12th.—Sale of **Shorthorn cattle** by J. W. Smith & Son at Allerton, Ia. Top price paid by Randolph Bros. & Igo, of Indianapolis, Ia., for the cow Missie May, 2d was \$2,000. Five females sold above \$1,000 per head.

1902.—Twenty-six auctions of pure-bred cattle held at Chicago, Ill., embodying the six leading beef breeds and embracing 1,789 head, sold for a total of \$611,817, or an average of \$342 each.

1902, December 8th and 9th.—Combined sale of Herefords at Kansas City, Mo. Average for seventy-six head, \$227.05. Top price, \$1,600, for the bull Hesiod's Best, 120,055, consigned by Benton Gabbert, of Dearborn, Mo., and bought by G. E. Reynolds, of Kansas City, Mo.

1902, December 18th.—**Hereford** sale at Wabash, Ind. Average for sixty-three head, \$225.70. Top price, \$1,300, for the cow Clotho, 18th, 117,714, consigned by Wabash Stock Farm Company, and sold to Ed. Hawkins, of Earl Park, Ind.

1902, December 19th.—Sale of **Percheron horses** at Kansas City, Mo., by D. R. Hanna. Mares, twenty-one head, averaged \$313.89; nine stallions averaged \$570; average of sale, \$392.

1902.—**Calf receipts** at Chicago, Ill., were phenomenal, the total for the year, viz., 251,747 head, establishing a new record.

1902.—The year's **sheep record** of all markets was broken at Chicago, Ill. During the year the total aggregated 4,515,716 head.

1902, December 13th.—**Largest receipts of cars** in one week at the Union Stock Yards, Chicago, 8,474.

1902, December.—Chicago International Live Stock Exposition. **Grand champion beef animal**, the Polled Angus steer, Shamrock; weight, 1,805 pounds as a two-year-old. Fed by the Iowa Agricultural College.

1903, January 1st.—United States Department of Agriculture estimate of **number of farm animals**: 17,105,227 milch cows, 44,659,206 other cattle, 46,922,624 hogs, 63,964,896 sheep, 16,557,373 horses, 2,728,088 mules.

1903.—**Promising new fruits** illustrated and described in Year Book, Department of Agriculture: Akin apple, Terry apple, Heley peach, Welch peach, Splendor prune, Sugar prune, Headlight grape, Cardinal strawberry.

1903, April 18th.—**Holstein-Friesian** champion cow Sadie Vale Concordia, A. R. O., 1,121, produced under official test 694.3 pounds of milk in seven days, containing 30 pounds 10.16 ounces of butter; also produced in thirty days 2,754.6 pounds of milk, containing 123 pounds 10 ounces of butter. Owned at time of test by Messrs. McAdam & Von Heyne, of Brothertown Stock Farms, Deansboro, Oneida county, N. Y.

1903, June 9th.—New York **spot cotton**, 12.40 cents per pound; highest in fifteen years.

1903, June 11th.—At Chicago **Shorthorn** sale, average \$371.25 for forty-eight head. Imp. Lord Banff sold by George E. Ward, of Sioux City, Ia., for \$2,105 to M. E. Jones, of Williamsville, Ill.

1903, June 12th.—New York auction sale of working **coach horses** realized an average of \$707 per head. The horses had been used in working the coach Pioneer between New York and Ardsley. Among the buyers were Harry Payne Whitney, G. G. Haven, Jr., and other well-known whips. The former paid the top price, \$4,750 for one pair. Several others were sold singly at \$1,000 to \$1,800.

1903.—At Chicago, June 13th and 14th, **Canadian Shorthorn** sale. W. C. Edwards, of Rockland, Ontario, forty-five head; average, \$448.90; John Dryden, of Brooklyn, Ontario, nineteen head; average, \$565; M. H. Cochrane, of Hillhurst, Quebec, eighteen head; average, \$683. Top price, \$2,110, paid by W. H. Dunwoody, of Minneapolis, Minn., for the bull Imp. Golden Mist, 182,753. Including fifteen females by Geo. Harding & Son, of Waukesha, Wis., averaging \$502, the grand average for ninety-eight head was \$536.40.

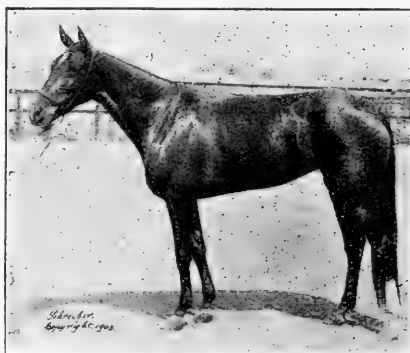
1903, June 14th.—One thousand dollars paid for a **peony called Jenny Lind**, named after the Swedish Nightingale. Sold by C. Betschler, of Canal Dover, O., to C. W. Ward, of Queens, N. Y. This peony blossoms early and is about eight inches in diameter.

1903, June.—**Kansas City Stock Yards** flooded by high water. Business suspended fourteen days.

1903, June 15th.—**Armour Packing Company** commenced operations at the St. Louis National Stock Yards.

1903, June 15th.—St. Joseph Stock Yards received 10,028 **fresh cattle**, the largest cattle receipts for one day on that market.

1903, July.—**History of Agriculture by Dates** first issued by Philip H. Hale, St. Louis, Mo.



LOU DILLON, 1:58½.

1903, July 11th.—At Cleveland, O., Lou Dillon broke the **world's record for trotting mares** by one-fourth of a second, going the mile in 2:03½. It was the second fastest mile ever trotted, Creseus alone having a better mark. Millard Saunders was in the sulky, and two runners accompanied the little mare around the track. She reached the first quarter in 0:31¼, and the half in 1:01¾.

1903, July 18th.—The first bale of new-crop **Texas cotton** was sold this day at the Galveston Cotton Exchange for \$136, and bought by C. Eisenburg. It weighed 470 pounds, and the price was a little less than 29 cents per pound. The bale was raised in Zapata county, one of the southern Rio Grande counties, where cotton was not raised before this year.

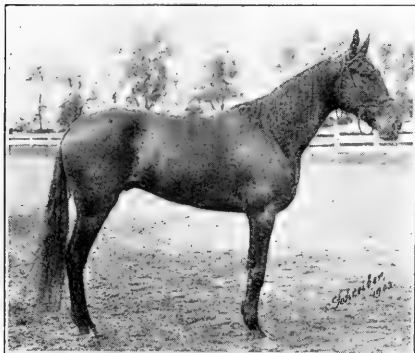
1903, August 17th.—**Record run of cattle** on the Chicago market; 36,727 head received this day.

1903, August 19th.—At New York, Dan Patch broke the **world's pacing record** at Brighton Beach by going a mile in 1:59, flat. The fractional times were: Quarter, 0:29½; half, 0:58¾; three-quarters, 1:29¼. The best previous record was 1:59¼, held jointly by Dan Patch and Star Pointer.

1903.—In this year the United States and Canada made a **record by canning** 10,679,809 cases of tomatoes, each case containing two dozen standard cans.

1903, September 9th.—At Syracuse, N. Y., the **world's record for trotting geldings** was broken by Major Delmar, its holder clipping a second from his own mark and three-quarters of a second from the former world's record established by Cresceus, Alta P. McDonald drove the gelding, Time by quarters—0:31¾; 1:01¾; 1:31½; 2:01¼.

1903, September 28th.—**Cattle receipts** at Chicago the largest on record for one day—44,445 head.



MAJOR DELMAR, 1:59¾.

1903, October 10th.—At Lexington, Ky., Major Delmar **reduced trotting record**, exhibition mile to wagon, to 2:03¾. Immediately after the performance of Major Delmar, Lou Dillon, driven by her owner, C. K. G. Billings reduced the record to 2:01¾. Time—Quarter, 0:31; half, 1:01; three-quarters, 1:30¾; mile, 2:01¾.

1903, October 10th.—Charmante of the Gron, 14,442, **Guernsey cow**, owned by H. McK. Twombly, finished the year's test, making a year's record of 11,874¾ pounds of milk, which contained 676.46 pounds of butter-fat, which, being churned and salted, would make 789.2 pounds of merchantable butter for the year.

1903, October 24th.—At Memphis, Tenn., Lou Dillon, the peerless trotter, owned by C. K. G. Billings, of Chicago, and driven by Millard Saunders, again proved her right to the proud title of **Queen of the Turf** by trotting a mile under adverse conditions in the remarkable time of 1:58¾. The daughter of Sidney Dillon was paced by a runner, and another followed closely to urge the mare to a supreme effort. A strong wind from the north swept down the back stretch, and it was not expected that she could cut anything from her former wonderful record. The quarter was reached in 30 seconds; the half in 0:59¼; the third quarter was passed in 1:28½; and the gallant little mare passed under the wire in 1:58¾. The timers were Bud Doyle, Fred Hartwell and John Dickerson, and the watches all agreed to a fraction.

1903.—Segis Inka, 36,617, **Holstein-Friesian cow**, sold at Averill & Gregory sale to Dr. Wm. N. Landon, of Syracuse, N. Y., for \$1,600; highest-priced female of this breed at auction since 1885.

1903, October 24th.—At Narragansett Park, Prince Alert clipped a quarter of a second from the **world's pacing record** for a half mile. The Prince was driven by Mart Demarest.

1903, October 24th.—At Memphis, Tenn., Darel, a bay mare, by Alcaender, driven by A. McDonald, **paced a mile** in 2:00¾. The

former pacing record for a mare was held by Fanny Dillard, 2:03¾.

1903, October 24th.—At Memphis, Tenn., Equity and The Monk, from the stable of Mr. C. K. G. Billings, of Chicago, were sent a mile against 2:12¼, **trotting to pole record**. The two horses were driven by Mr. Billings in faultless style, and passed under the wire in 2:09¼.

1903, October 27th.—Major Delmar trots in 1:59¾, establishing the **world's gelding record**.

1903.—"Country Life in America" for this year says that the annual **sale of cut roses** in the United States amounts to about \$6,000,000; carnations, \$4,000,000; violets, \$750,000; and chrysanthemums—a short-season crop—\$700,000. The annual production is estimated at \$100,000,000 each for roses and carnations and \$50,000,000 for violets.

1903, December 31st.—D. Rankin, of Tarkio, Mo., concluded a purchase of 3,500 **stock cattle and feeders** on the Kansas City market, shipping them out in 125 cars. Considered a record purchase of this character by one man.

1903, December.—Chicago International Live Stock Exposition. **Champion beef steer** the grade Hereford steer Challenger, Weight, 1,750 pounds. Fed and exhibited by the Agricultural Experiment Station, Lincoln, Nebraska.

1903.—**Grain production** of the year: 2,244,177,000 bushels corn, 637,822,000 bushels wheat, 784,094,000 bushels oats, 131,861 bushels barley, 29,363 bushels rye.

1903.—**Highest wheat**, September, 93 cents; highest corn, July and August, 53 cents; highest oats, July, 45 cents. **Lowest wheat**, March, 70¼ cents; lowest corn, December, 41 cents; lowest oats, March, 31 cents.

1904, January 1st.—United States Department of Agriculture estimate of **number of farm animals**: 17,419,817 milch cows, 630,144 sheep, 16,736,059 horses and 2,757,916 mules.

1904.—**Promising new fruits** mentioned and illustrated in Year Book of the United States Department of Agriculture: Bloomfield apple, Doctor apple, Rossney pear, Millennial grape, Perfection currant, Delmas persimmon.

1904, January 11th.—**Largest receipt of cars** in one day at the Union Stock Yards, Chicago, 3,238.

1904, March 1st.—Auction sale of **jacks and jennets** by L. M. Monsees & Sons at Smithton, Mo. Top price for a jack, \$1,500; average for twenty-nine head, \$531.



MISSOURI JOSEPHINE SARCASTIC—DAUGHTER OF MISSOURI CHIEF JOSEPHINE. Milk record for six months, as a two-year-old: 7,037 pounds. This is 334 pounds higher than her dam's record at the same age. Bred and owned by the University of Missouri.

1904, March 24th.—In the open market at Chicago a roan **Shire draft gelding** was sold for the record price of \$660. According to the Drovers' Journal, this champion roan

drafter was consigned by William Gray, of Mechanicsville, Ia., and purchased by Armour & Co. at the highest price paid in the open market for a drafter for commercial use. The gelding was four years old and weighed 2,210 pounds. This champion drafter was bred by Perry Terrill, of Oxford Mills, Jones county, Ia., and was sired by the imported Shire stallion Ringmaster, and whose dam was sired by the imported Shire stallion Ringleader. This gelding fulfilled the promise of his high quality by winning the blue ribbon in his class at the International Live Stock Show.

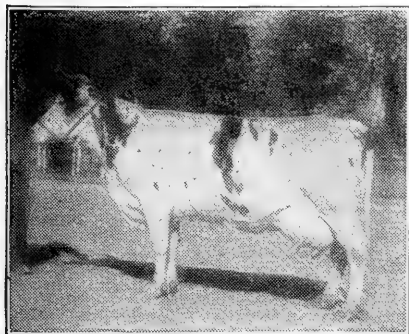
1904, April 1st.—Geo. H. Northrup, of Raceville, Washington county, New York, reported having sold nineteen *Rose Comb Minorca* fowls for \$3,400, breaking the world's record in poultry sales. Victor, the first-prize cock at Chicago, brought \$1,000, and Headlight, 2d, the second-prize cock at Chicago, brought \$500. The buyer was Henry Schultz von Schultzenstein, of Berlin, Germany.

1904.—*Louisiana Purchase Exposition* opened April 30th and closed December 1st. Live stock exhibit the greatest ever recorded in history.

1904, June 15th.—The St. Louis National Stock Yards received 318 cars, 8,857 head, *Texas and Southern cattle* a record day in quarantine cattle.

1904, June 18th.—At Cleveland, O., Mr. C. K. G. Billings rode Charlie Mac a *mile to saddle* in an effort to break the amateur world's record of 2:19½. The record was lowered to 2:17¾.

1904.—At the Louisiana Purchase Exposition, through the resourcefulness and energy of Mr. Will B. Otwell, 8,000 Illinois farmers' boys exhibited a grand pyramid, consisting of 1,000 small pyramids, each containing ten ears of *pure-bred corn*.



HOLSTEIN COW—JOLIE JOHANNA. At ten years old, in the ninety-day demonstration test at St. Louis, she gave 5,064.4 pounds of milk and 169.99 pounds of butter-fat, equivalent to 212.48 pounds of butter, an average daily yield of 2.56 pounds of butter. She was first-prize cow at the St. Louis World's Fair, champion senior female at the World's Fair, and grand champion female of the Holstein breed at the same Fair. Her official test made on the World's Fair Ground at St. Louis was 544.6 pounds of milk, 19.61 pounds of butter-fat, the equivalent of 23 pounds and 14 ounces of butter in seven consecutive days. JOLIE JOHANNA is owned by the State Agricultural College of Colorado.

1904.—The stallion *Carmon*, 32,917, American Trotting Register, 16 hands; weight, 1,200 pounds in fair condition, was selected to head the stud to establish a breed of *American carriage horses*. *Carmon* was bred by Hon. Norman J. Colman, of St. Louis, Mo.

1904, June 18th.—At Chicago, without feeling the touch of the whip or spur and running entirely on his own courage, Highball, the three-year-old colt which W. M. Scheffel brought to Chicago from the East, won the *American Derby* at Washington Park. The time, 2:33, equals the best time ever made for this event.

1904, June 18th.—At Cleveland, O., before a crowd of 10,000 horse lovers at the Glenville track, Lou Dillon, the trotting queen, driven by her owner, C. K. G. Billings, was sent a *mile to wagon* to beat the amateur record of 2:10. The mare made the distance in 2:06½. The last quarter was made in thirty seconds.

1904, June 25th.—*World's Fair Trotting Handicap* (at St. Louis Fair Grounds), mile and a quarter, won by Colonial Girl. Time, 2:09½. Stake worth \$11,400.

1904, September 12th.—The largest one-day's receipts of *horses and mules* at the St. Louis National Stock Yards, 4,242 head.

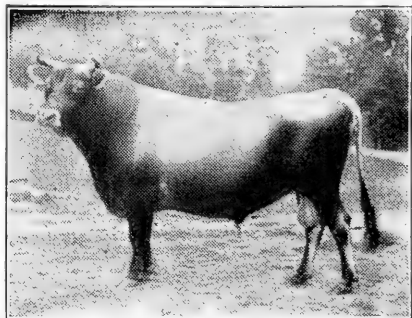
1904, September 29th.—*Great sale of hunters and hounds*, the property of Foxhall P. Keene, at the stables of Van Tassel & Kearney, New York City. Eight American-bred cross-country horses sold for \$20,300, an average of \$2,537 per head, and a pack of imported English fox hounds brought \$6,150.



JERSEY COW—LORETTA D. As champion cow of all breeds in the St. Louis Fair Contest, LORETTA D. is the latest grand champion of the Jersey breed. In the contest of 120 days this cow gave 5,082.7 pounds of milk, 4.8 per cent. fat, yielding 250.16 pounds butter-fat, equivalent when salted to 330.04 pounds of commercial butter.

1904, October 13th.—*End of dairy cow demonstration* at World's Fair, St. Louis. Loretta D., 111,708, owned by the estate of W. S. Ladd, Portland, Oregon, winner in contest. In 187 days Loretta D. produced 5,214.7 pounds of milk, a daily average of 39.3 pounds, giving 414.64 pounds of butter-fat, equal to 490.12 pounds of commercial butter, an average of 2.62 pounds of butter per day. Loretta D. is a high-bred Jersey cow.

1904, October 21st.—The Monk and Equity *trot a mile* in 2:07¾ at Memphis, Tenn., establishing the world's team record.



JERSEY BULL—SILVERINE COOMASIE. This bull had the distinguished honor of heading the champion Jersey herd at the Louisiana Purchase Exposition. He was first-prize winner wherever shown and never beaten by any bull of his age. Presented here as a typical Jersey bull of the highest quality.

1904, October 24th.—At the Chicago Union Stock Yards, Mr. L. M. Newgass made a record by selling a matched pair of **bay draft geldings**, the team weighing 4,480 pounds. The sale was made to Mr. H. K. Bloodgood, of Boston, and the price was \$1,000 for the pair.

1904, October 25th.—At Memphis, Tenn., Prince Direct and Morning Star pace in 2:06, making world's amateur team record, driven by C. K. G. Billings.

1904, October 25th.—Dan Patch establishes world's **pacing record** at Memphis, Tenn., reducing the mark to 1:56.

1904, December.—Chicago International Live Stock Exposition. **Grand champion beef animal** the Aberdeen-Angus steer Clear Lake Jute, fed and exhibited by the Minnesota Agricultural Experiment Station. Live weight at thirty-eight months, 1,895 pounds.

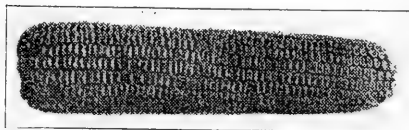
1904.—Grain production of the year: 2,467,481,000 bushels corn, 552,400,000 bushels wheat, 894,595,000 bushels oats, 139,749,000 bushels barley, 27,242,000 bushels rye.

1904.—Largest receipts of **horses and mules** at any market in one year, 181,341 head, received this year at the St. Louis National Stock Yards.

1904.—Highest wheat, September, October and December, \$1.22; highest corn, November, 58½ cents; highest oats, February, 46 cents. **Lowest wheat**, January, 81¼ cents; lowest corn, January, 42¾ cents; lowest oats, October and December, 28¾ cents.

1905, January 1st.—United States Department of Agriculture estimate of **number of farm animals**: 17,572,000 milch cows; 43,669,000 other cattle, 47,321,000 hogs, 45,170,000 sheep, 17,053,000 horses and 2,889,000 mules.

1905.—Promising new fruits mentioned and illustrated in the Year Book of the United States Department of Agriculture: Virginia Beauty apple, Carson apple, Crocker pear, Everbearing peach, Golden plum, Riley, Scioto and Pringle Damson plums, Trapp Avocado pear, Eulalia Loquat.



Grand champion ear of corn.

1905.—At the meeting of the Iowa Corn Growers' Association held at Ames, Ia., in January, an **ear of corn** grown by Mr. H. J. Koss, of Farragut, Ia., was declared the grand champion of the show. It was sold at auction and was bought by Jno. T. Alexander, of Chicago, for eleven dollars.

1905, February.—The National Farmer and Stock Grower, of St. Louis, Mo., started the agitation against the **high rate of interest** charged upon farm loans.

1905, March 6th.—Largest receipts of horses in one day at the Union Stock Yards, Chicago, 2,177 head.

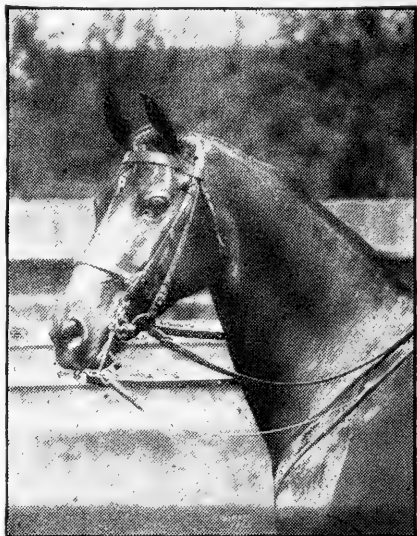
1905, March 11th.—Largest receipts of horses in one week at the Union Stock Yards, Chicago, 4,768 head.

1905, March 11th.—Largest receipts of horses in one month at the Union Stock Yards, Chicago, 18,448 head.

1905, April 17th.—C. M. Rand, a horse dealer, sold the highest-priced car-load of **draft horses** on the Kansas City market to this time. The car-load contained sixteen head that weighed 1,600 to 2,150 pounds, and brought \$230 to \$275, or an average price of \$251.51. The horses were shipped in from Iowa.

1905.—In a **three-mile running race** at Oakland, Calif., Saturday, April 8th, the American record for that distance was lowered by Elie, a four-year-old son of St. Carlo, owned by C. Stuenkel. Carrying 93 pounds, Elie defeated Dr. Leggo, the favorite, Veterano, Orchan, Barney Dreyfus, Flying Tornado and Graftier, and covered the

three miles in 5:22, the best previous time having been Drake Carter's record of 5:24, made at Sheephead Bay in September, 1834.



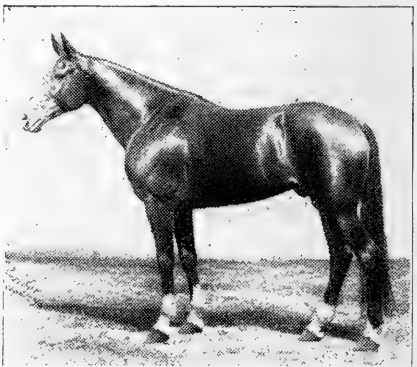
HEAD OF MY LADY DAINTY—Typical New York saddle mare of the best class.

1905, April.—M. H. Tichenor & Co., of Chicago, sold May Morning, a golden chestnut saddle horse, five years old, fifteen hands high, to J. H. Moore, for \$3,650. This was at a New York auction and reported to be the highest price paid for a **saddle horse** on the auction block.

1905, April 27th.—A pair of **big mules** sold for \$540 at the St. Louis National Stock Yards by Campbell & Reid and Western Sale Stables Company, reported as being the highest-priced pair sold in the open market.

1905, May 21st.—Largest receipt of calves in one week at the Union Stock Yards, Chicago, 15,910 head.

1905, July.—An arbitration award by the King of Italy respecting the Anglo-Portuguese frontier in Africa, apportions the last piece of vacant or unappropriated land on that continent. It also awarded the **last piece of land available for colonization** in the known world, Africa being under government control.



JOE PATCHEN, 2:01¼—Black horse, by Patchen Wilkes. Holder of pacing record for fastest two-heat race by a stallion, 2:03. 2:02½. Sire of Dan Patch, champion harness horse.

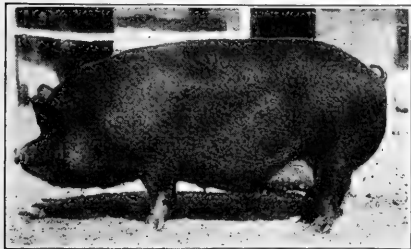
1905, May.—Two of the best mules ever seen at St. Louis were marketed by Frank Platter, of Chillicothe, Mo. They were a ripping big pair, weighing over 3,200 pounds, and were good all over. The best evidence of this was that they brought \$540. One of these mules was what was properly designated "a cracker-jack." She was said by every dealer to be the best mule they had ever seen, not in a month, or a year, but their whole experience. She weighed 1,690 pounds, and had the shape, the quality, the style, bone, foot and everything to make her a remarkable mule. Several dealers bid \$325 to \$330 for her alone. The mules were bought by Mr. Platter from Ben Broyles, of Chula, Mo.

1905, May.—Largest receipts of calves in one month at the Union Stock Yards, Chicago, 62,749 head.

1905, August.—Reciprocity Conference at Chicago for the purpose of encouraging trade in farm and ranch products with foreign nations.

1905.—In the month of July, New York received 314,560 packages of butter, the largest arrivals to that time.

1905, August 17th.—At Decatur, Ill., The Broncho paces in 2:03¾, making a world's record for mares.



QUEEN ESTHER, 3,038—ESSEX SOW. First-prize winner and sweepstakes sow at the St. Louis Fair, 1902, the only time shown. Her pigs were first-prize winners in 1901, also in 1902. Bred and owned by Peter Miller & Son, of Belleville, Ill.

1905.—At Springfield, Ill., on November 2d, a sale of **Shire horses** was held by J. S. Wright and Storey & Son. The five stallions averaged \$417, and the top price was \$975, paid by Wm. Spears, of Tallula, Ill., for Lord Bob, a six-year-old stallion, sired by Dandy Dick. The best price for a female was \$410, paid by C. G. Spence, of Assumption, Ill., for Forest Belle, a four-year-old, sired by Rampton.

1905, September 30th.—During the year ending on this day, the **Guernsey cow** Yeska Sunbeam gave 14,920.8 pounds of milk, averaging 5.74 per cent. fat, equal to 857.15 pounds of pure butter-fat and equivalent to 1,999 pounds of merchantable butter, this being the world's official butter-fat record made under public supervision.

1905, October 7th.—In a contest against time the famous champion harness horse, the stallion Dan Patch, established a **world's record by pacing** in 1:55¾. This at Lexington, Ky.

1905, October.—Largest receipts of sheep in one month at the Union Stock Yards, Chicago, 690,956 head.

1905, November.—The Eastern stable of show horses belonging to Mrs. J. B. M. Grosvenor being sold at auction, brought a total of \$54,250 for twenty-eight head, which is an average of \$1,937.50 per head. The carriage team, The Baron and The President, sold to Dr. J. G. Lyman for \$8,000. Pow Wow and Tomahawk, another pair, sold for \$8,500 to J. E. Denny, of Pittsburgh, Pa. The high price for a single animal was \$2,800, paid for Petroleum, a 15½ black gelding, bought in for Mrs. Grosvenor.

1905. At New York, on November 22d, Cresceus, the famous trotter, was sold in Madison Square Garden for \$21,000 to M. W. Savage, of Minneapolis, Minn. who also owns

Dan Patch, Arion, and other famous horses. The only other bidder was P. H. McGuire, of New York, who offered \$20,000. Nearly 5,000 people were present to see the sale.

1905.—During the year the **pure-bred stock sales** at the Chicago Union Stock Yards amounted to thirty-five, at which 584 head of cattle were sold at an average of \$161.90 per head. The Shorthorns were 120; average, \$215.25. Herefords, 142; average, \$137.20; Aberdeen-Angus average, \$156.08; and Galloways, fifty-six head; average, \$155.70.

1905, December.—International Live Stock Exposition at Chicago. **Campion beef steer** Blackrock, Aberdeen-Angus, two-year-old, weighing 1,650 pounds. He was fed at the Iowa Agricultural College and was sold at 25 cents a pound.

1905.—The **canning of corn** in the United States and Canada reached a total of 13,418,665 cases, each case containing two dozen standard cans. Iowa led the list, with 2,557,194 cans.

1905, December 5th.—At Van Tassel & Kearney's auction stables, New York City, five hundred **thoroughbred horses** were sold under the hammer when Watercress sold for \$71,000.

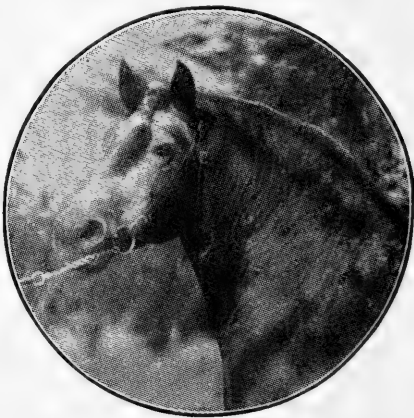
1905.—**Grain production** of the year: 2,707,993,000 bushels corn, 692,979,000 bushels wheat, 953,216,000 bushels oats, 131,551,000 bushels barley and 28,486,000 bushels rye.

1905.—**Highest wheat**, February, \$1.24; highest corn, May, 64½ cents; highest oats, July, 34½ cents. **Lowest wheat**, August, 77½ cents; lowest corn, January and December, 40 cents; lowest oats, September, 25 cents.

1905.—**Promising new fruits** mentioned and illustrated in the Year Book of the United States Department of Agriculture: Magname apple, Oliver red apple, Rabun apple, Early Wheeler peach, Banner grape, Josephine persimmon and the Chappelow Avocado or Tropical pear.

1905.—Largest receipts of horses in one year at the Union Stock Yards, Chicago, 127,250 head.

1906, January 1st.—United States Department of Agriculture estimate of **number of farm animals**: 19,794,000 milch cows, 47,068,000 other cattle, 52,103,000 hogs, 50,632,000 sheep, 18,719,000 horses and 3,404,000 mules.



THE PERCHERON HORSE from LaPerche, France, is the most numerous breed of draft horses in the United States.

1906.—The **draft-horse sale** held at Bloomington, Ill., January 4th and 5th, under the management of C. W. Hurt, resulted in a general average of \$362.95 for fifty-three head. The eighty-nine stallions average \$424.25, and sixty-five mares averaged \$311.55. The Percheron stallion Prudent, sired by Hercules, sold at \$1,650 to J. C. Good, of Flannagan, Ill.; Germain, sired by Odeon, sold for \$1,040 to Emanuel Cross,

of Adrian, Mich.; and Pedroe, sired by Sannett, 2d, sold to Wm. Rumney & Sons, of Sonoma, Ill., for \$1,005. The top-price mare, Colly P., sired by Powerful, sold to Wm. Zundahl, of Forrest, Ill., for \$635.

1906, January.—Ohio Chief, \$727, a **Duroc-Jersey boar**, was sold by S. E. Morton, of Camden, Ohio, for \$2,000 to Mr. B. J. Harding, of Macedonia, Wis., this representing the record price for a Duroc-Jersey boar. Ohio Chief was bred and raised by Mr. Morton and was first-prize boar, two years old and over, and reserve senior champion at the Louisiana Purchase Exposition.

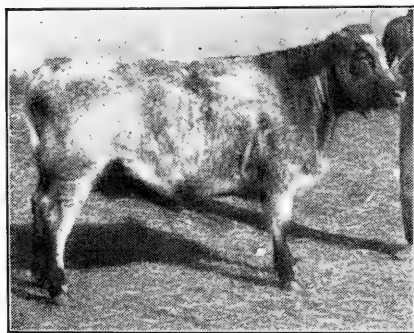
1906, January.—In this month the St. Louis National Stock Yards received 29,831 **horses and mules**, a world's record.

1906, February 2d.—At a public sale of **Duroc-Jersey swine**, Helen Blazes, Ill., a daughter of Tip Top Notcher, out of Helen Blazes, bred by H. E. Browning, of Ripley, Ill., was sold for the record price of \$1,000 to J. Coy Roach, of Girard, Ill.

1906.—On February 5th, at Omaha, Mark M. Coad, of Fremont, Neb., sold American-bred **Percheron horses** under the management of John S. Cooper. At the sale seventeen two and three-year-old stallions sold for \$10,100, averaging \$594.15, and eleven mares brought \$3,860, an average of \$351, while the twenty-eight head averaged nearly \$500. The top price was \$1,000, paid by M. B. James, of Aurora, Neb., for the stallion Albion, and E. K. Miller, of Hampton, Neb., paid \$600 for Lady Beatrice, the top-priced mare.

1906.—At a sale of **Shorthorn cattle** held at Perth, in Scotland, Lord Lovat sold the bull Broadhooks Champion to Mr. Miller, an Argentine exporter, for 1,500 guineas English money, equal to \$75,000 in American money.

1906, February.—The grand champion fat steer at the Western Live Stock Show, a yearling Shorthorn, weighing 1,150 pounds, was sold to J. D. Miller at 33 cents a pound, the highest price ever paid for a **steer in Colorado**. The steer was fed and exhibited by the Colorado Agricultural College.

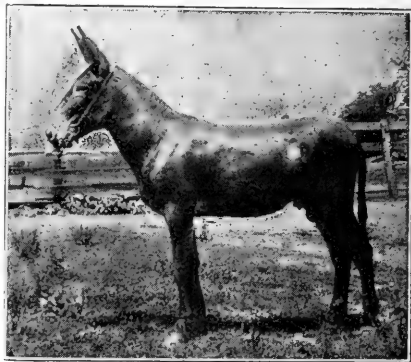


SUSAN CUMBERLAND—Junior champion Shorthorn female at the American Royal Show of 1909. Exhibited by D. R. Hanna, of Ravenna, Ohio.

1906.—At Vandalia, Ill., February 25th, G. G. Council sold forty-two head of hogs at a public sale at an average of \$258 per head. The hogs were **Berkshires**. This was said to be the world's record. Another high price was set in the sale of Baron Duke, Fiftieth, which brought \$1,600. This hog was sold to W. S. Corsa, of Whitehall, Ill.

1906.—In March some public sales of **Poland-China swine** were at strong prices. E. H. Ware, at Douglas, Ill., sold fifty-four head at an average of \$119.33, with a top price of \$380. E. L. Jimison, at Oneida, Ill., sold fifty head at \$116 per head, with \$910 the top price, paid by Frank Walgemuth, of Elgin, Ill., for Keep Sake, a Keep On boar; J. C. Hanna, of Middletown, Ia., sold forty-four head at an average of \$110.60, with a top price of \$320. Line Lukens, of Disko, Ill., sold sixty head at \$104.23 per head, the top price at the sale being \$600.

1906, March.—A notable sale of **mules** was effected at Atlanta, Ga., by Herren, Bradbury & Co. There were twenty head, averaging \$452.50. One pair of show mules included in the lot brought \$1,150 and were Topsy and Molly, World's Fair champions. It was a record price for mules.



ORPHAN BOY—Grand champion jack at the Louisiana Purchase Exposition, 1904. Exhibited by L. M. Monsees & Sons, of Smithton, Mo.

1906, March 6th.—At the sale of **jacks and jennets** held by L. M. Monsees & Sons, of Smithton, Mo., several records were broken, as follows: Highest-priced jack at auction, Good Nature, two years old, sold to Wm. Van Sweringen, of Holton, Kas., for \$1,600. Highest average for jacks, \$856.30 per head for thirty head, and largest total amount of sale, \$31,990. The jennet average was \$169.72 for twenty-seven head. High Style, a four-year-old jack, sold to the Goodrick Stock Farm, of Eldon, Mo., for \$1,510; and Boston, a three-year-old, sold for \$1,425 to J. W. Stokey, of Gansing, Kas., for \$1,425. The best price for a jennet was \$565 for Toddie, bought by R. E. Deere, of Buffalo, Missouri.

1906, March 7th.—At Green Bay, Wis., the Hagemester Stock Farm sold fifty head of **Percheron horses** for an average of \$501.50. The sixteen stallions included three at \$1,000 and upward, and the average was \$612.50; and thirty-four mares averaged \$501.50. The top-price stallion was \$1,250, paid for Eclair, a six-year-old, sold to Con. Keef, of Depere, Wis. The best price for a mare was \$900, paid by Fred Fabst, of Milwaukee, Wis.

1906, March 19th.—A. J. Lovejoy & Sons, of Roscoe, Ill., sold the **Berkshire boar** Masterpiece, 77,000, for \$2,500 at private sale, the purchaser being W. S. Corsa, of Whitehall, Ill.

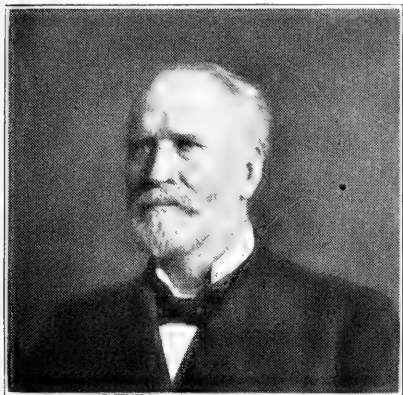
1906, April.—At a combination sale of **trotting horses** held by the Blair-Baker Horse Company, of Indianapolis, Ind., Grace A., 2:12½, by Anderson Wilkes, topped the market for trotters at \$5,000, while the grand young mare, Alfalfa, 2:11½, by Argot Wilkes, brought \$3,800, the top price for pacers. Numerous sales were made between \$1,000 and \$2,000.

1906, April 3d.—At the St. Louis National Stock Yards the McFarlane Commission Company sold twenty-one head of mules for Ratz Bros., of Red Bud, Ill., for an average of \$237.50, the record price for a load of mules sold on consignment in the market.

1906, May 1st.—Largest receipts of calves in one day at the Union Stock Yards, Chicago, 9,284 head.

1906, May 17th.—At the annual Spring Show held on the Island of Jersey, the cow Karank, the winner of the English **Jersey Cattle Society** gold medal, established a butter record for the island. She made three pounds six and one-half ounces of butter in twenty-four hours, the best ever reached in a public test on the island. Karank is owned by Mr. G. L. Gruchy; was seven years old and 123 days in milk. There were eighty-one entries in the contest.

1906, May 15th.—Close of official year in testing **Holstein-Friesian** cows for advanced registry. During this official year 1,545 Holstein-Friesian cows and heifers of all ages were officially tested for a period of seven consecutive days or longer, producing for the seven consecutive days 581,959.5 pounds of milk, containing 19,701.3 pounds butter-fat, and showing an average of 3.39 per cent. fat. The average weekly production for each animal so tested was 376.7 pounds milk, containing 12.75 pounds butter-fat, equivalent to 53.8 pounds milk, or over twenty-six quarts daily, and nearly fifteen pounds of the best quality of butter per week for each cow.



HON. JAMES WILSON, of Tama county, Iowa, United States Secretary of Agriculture. He served the longest term of any Secretary of Agriculture.

1906, June 19th-21st.—The dispersion sale of the herd of **Shorthorn** cattle established by G. M. Casey, of Clinton, Mo., and later known as the Tebo Land and Cattle Company herd, took place at Kansas City, Mo. The result was an average of \$308.60 for 166 females, an average of \$1,013.35 for eleven bulls, and a general average of \$377.75 for 177 head. The bulls included the grand champion Choice Goods, 186,802, sold at \$5,500 to Howell Reese, of Pilger, Neb. Two sons of Choice Goods sold at \$1,500 each. The top price for females was the imported cow Marengo's Lavender Countess with heifer calf by Choice Goods at foot and sold for \$2,150 to C. E. Leonard & Son, of Bell Air, Mo. The grand champion cow Ruberta also sold to Howell Reese at \$1,325. Thirty-one of the get of Choice Goods sold at the sale for \$18,734.85. The total amount realized at the sale was \$63,337.

1906, June.—De Kolve Creamelle, 59,155, **Holstein** cow owned by D. W. Field, of Dutchland Farms, Montello, Mass., finished a hundred-day milking test, giving 10,017 pounds of milk, 2.84 per cent. fat, or 281 pounds of butter-fat, equivalent to 335 pounds of merchantable butter. This cow is claimed to hold the largest official single-day milk record, 119.4 pounds of milk; the largest seven-day record, 780.3 pounds of milk; the largest thirty-day record, 3,200.3 pounds of milk; the largest sixty-day record, 6,251 pounds of milk; the largest ninety-day record, 9,454 pounds of milk; and the largest hundred-day record, 10,017 pounds of milk. The hundred-day milking record was nearly equal to twelve gallons of milk per day.

1906, June 29th.—The President signed the bill passed by Congress and introduced by Hon. W. A. Rodenberg, of Illinois, which extends the time of **live stock** in transit without unloading from a limit of twenty-eight hours to a maximum of thirty-six hours. This is to be done upon written request of the owner or person in charge of the particular shipment.

1906, June 29th.—Congress passed a law providing for an appropriation of \$3,000,000

to defray the expenses of enlarged inspection of **American live stock** and live stock products, the same to be as formerly under the control of the United States Department of Agriculture. For a long time the bill was delayed through a determined effort to change existing methods and saddle the salaries of the government inspectors upon the stock raisers of the country by first charging it up to the packers, who would simply buy all stock subject to inspection and clearance certificate, thereby shifting a direct tax of so much per head upon all live stock sold in market to be paid by the owner thereof. The happy result whereby eighty millions of people pay the tax and the government pays and controls its own inspectors was largely due to the House Committee of Agriculture and more especially to Hon. James W. Wadsworth, of New York state, to whom the farmers and stock raisers are under great obligation.

1906, August.—In England the American eleven-year-old mare Grace Greenlander, 2:18 $\frac{1}{4}$, reduced the **trotting record** for three miles in a race and over a half-mile track to 7:15 $\frac{1}{4}$. The fractional time was: Half, 1:11; mile, 2:23; one and one-half miles, 2:36; two miles, 4:50; two and one-half miles, 6:04; three miles, 7:15 $\frac{1}{4}$; making the second mile in 2:37 and the third in 2:25 $\frac{1}{4}$. Three other horses started, two of which did not finish, while the third came in about 20 yards behind.

1906.—At Readville, Mass., August 31st, the seven-year-old mare Ecstatic paced a mile in 2:01 $\frac{1}{4}$, reducing the record for a pacing mare in a race.

1906, August 25th.—At Galesburg, Ill., the bay mare The Broncho distinguished herself by **pacing a mile** in 2:00 $\frac{3}{4}$, establishing the one-mile pacing record for a mare against time.

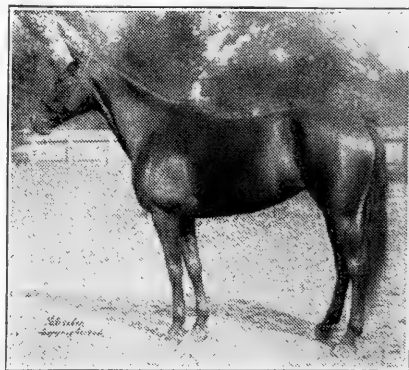
1906, August 25th.—At Readville, Mass., the **pacing gelding** Bolivar, by Wayland W., 2:12 $\frac{1}{2}$, dam Belle W., by Conn's Harry Wilkes, negotiated a mile in a race in 2:00 $\frac{3}{4}$, equaling the performance of Prince Alert in 1901.

1906, August 29th.—At Readville, Mass., the gelding My Star reduced the **gelding pacing record** for a new performer to 2:03 $\frac{3}{4}$.

1906.—At Libertyville, Ill., September 7th, the brown stallion Solon Grattan trotted a mile in 2:10 $\frac{1}{2}$ on a half-mile track, thereby establishing a record.

1906, September 12th.—At Syracuse, N. Y., the bay mare Sweet Marie trotted a mile in a race in 2:03 $\frac{1}{2}$, establishing a world's record.

1906.—At Columbus, Ohio, September 17th, the brown mare Italia established a record for a new performer by **pacing a mile** in 2:04 $\frac{1}{4}$.



SWEET MARIE, 2:02.

1906, September 18th.—At Columbus, Ohio, the bay filly Brenda York, by Moko, paced a mile in 2:08 $\frac{3}{4}$, thereby establishing a record for three-year-old fillies.

1906, September 21st.—At Columbus, Ohio, Sweet Marie, in her ninth year, in a contest against time, negotiated the **trotting mile in 2:02**. She went the first quarter in 0:30; the half in 0:59¾; and three-quarters in 1:30. Sweet Marie was driven by Alta McDonald.



AMERICAN GIRL.—A famous prize-winning bay saddle mare, bred by J. D. & L. B. Smith, of New Berlin, Ill. Foaled in 1892. Owned later by W. J. Roe, of Oshkosh, Wis.

1906.—At Columbus, Ohio, September 21st, The Abbe, black colt, by Chimes, trotted a mile in 2:10¾, giving him the joint **claim to record** made by Arion in 1902.

1906, September 26th.—The **First Cow Test Association** organized in Newago county, Michigan. The plan is that fifteen or twenty dairymen form an association and pay \$1.90 per cow per year to help defray the expenses of the test. A competent person is hired to make the tests. By this means records are kept and the good dairy cows become known and bred from and the unprofitable cows are sent to the butcher.

1906, October 6th.—Largest receipts of **sheep** in one week at the Union Stock Yards, Chicago, 179,490 head.

1906, October 8th.—Educational **poultry exhibit car** started on the Missouri Pacific Railroad. Was on the road twelve days; stopped fifteen times and held eighteen meetings; forty-nine lectures were delivered; 4,089 persons attended the meetings and 15,250 people visited the car. It was in charge of John T. Stinson, Agricultural Agent; C. M. Lewelling, Poultry Speaker; Henry Steinmesch, Expert Poultryman and Judge. R. M. Washburn, State Dairy Commissioner, delivered addresses on dairy subjects.

1906, October 9th.—At a sale of **Western range horses** held by Campbell & Reid and Western Sale Stables Company at the St. Louis National Stock Yards, 3,442 horses were sold at auction in six hours, establishing a world's record. J. Tobe Ward and P. M. Gross officiated as auctioneers. These horses brought \$172,000. A load of these Western range horses sold for \$111.00 round, the highest price ever paid for a load of range horses at public auction.

1906, October 16th.—"First Apple Day" set apart to be celebrated every year so long as time shall last. This was by the American Apple Growers' Congress at their annual meeting held at St. Louis. The officers: President, Henry M. Dunlap, of Savoy, Ill.; Vice-President, W. R. Wilkinson, of St. Louis; Secretary, T. C. Walsh, of Hannibal, Mo.; Treasurer, Wesley Greene, of Des Moines, Ia.; Statistician, John A. Stinson, of Springfield, Mo. Apple Day is the third Tuesday in October.

1906, October.—The Joseph A. Maxwell Mule Company, of St. Louis, Mo., consigned **twenty-seven mules** to the opening of the Fiss, Doerr & Carroll Grand Pavilion in New

York City, where they were sold at auction by electric light on October 25th at 8 p. m., following the sale of a lot of Percheron horses. They were sold by the pair at a range of \$525 to \$750, two pairs of them bringing \$750 each. These mules stood 16 to 17.1 hands, and the average weight was 1,500 pounds, which is 30 pounds more than the average weight of a 16-hand mule.

1906, October 2d.—At Lima, O., George G., bay gelding, **trotted a mile** against time on a half-mile track in 2:08¾, thereby establishing a world's gelding half-mile track record.

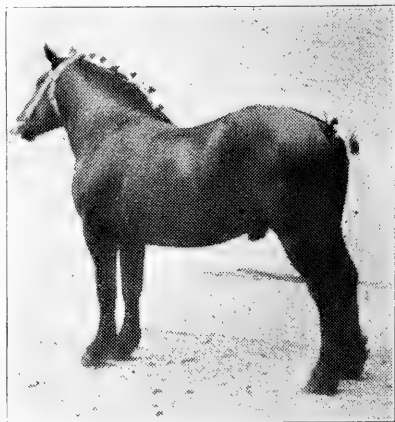
1906, November 7th.—Near Lawton, Okla., a negro girl from Hill county, Texas, picked **705 pounds of cotton** in one day. She was but fifteen years old, and this was claimed to be a world's record for cotton picking, considering age, size and sex.

1906.—On November 29th, Sweet Marie, the famous trotting mare, with the record of 2:02, was sold at Madison Square Garden for \$14,000 to E. T. Statesbury, a Philadelphia banker. Sweet Marie was bred by Frank C. Shumaker, of Los Angeles, Calif.

1906, November.—Mr. J. Ogden Armour bestowed \$5,000 annually to be distributed at the International Live Stock Exposition of Chicago and to be competed for by the State Agricultural Colleges. This provides for **twenty scholarships** to be known in his name. In making the presentation Mr. Armour said: "It is my desire that the recipients of the scholarships be limited to boys whose parents are unable to give them the advantage of an agricultural education."

1906, November.—Jos. A. Maxwell Mule Company, of the St. Louis National Stock Yards, sold a pair of five-year-old, seal-brown mules, 17 hands high, the team weighing 3,710 pounds. These were bought by Robert Harrington and shipped by him to Atlanta, Ga., where they were resold for \$1,000.

1906, December.—International Live Stock Exposition. **Grand champion beef steer** of the show the pure-bred Hereford calf Peerless Wilton, 39th's Defender, eleven months old; weight, 975 pounds. The first calf awarded this high honor. A great example of baby beef. Bred and fed by F. A. Nave, of Attica, Ind.

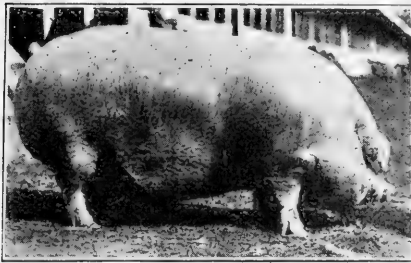


DRAGON.—First-prize Percheron stallion.

1906, December.—International Live Stock Exposition. The two-year-old **Percheron stallion** Dragon, first-prize winner, sold by McLaughlin Bros. to Mr. H. G. Spohr for the record price of \$5,000.

1906, December.—International Live Stock Show. Grand champion, Aberdeen-Angus bull Vala's Rosegay. Grand champion female, Eileen Lass. Grand champion Shorthorn bull, Whitehall Marshall; female, Welcome of Meadow Lawn. Galloways—Senior champion, Pat Ryan; female, Myrtle of Avondale. Herefords—Senior champion

bull, Princeps, 4th; female, Heliotrope, Polled Durlams—Senior champion bull, Grover Abbotshurn; female, Lady Abbotshurn, Red Polls—Senior champion bull, Water Boy; female, Jessie.



CLARA H.—CHESTER WHITE SOW.
Two years old. Champion at the Illinois State Fair, 1905. Exhibited by W. A. Hoover, of Oskaloosa, Iowa.

1906, December 24th.—From London, England, the first consignment of **English apples** was sent to the Red Sea by G. Hodges, of the Covent Garden Market, to Port Sudan. The apples were packed carefully in barrels, containing 120 each, all of the same quality and size. The sorts selected were as follows: Wellingtons, Blenheim, Queenings and Greenings.

1906.—Largest receipts of calves in one year at the Union Stock Yards, Chicago, 413,269 head.

1906.—Largest receipts of sheep in one year at the Union Stock Yards, Chicago, 4,805,449 head.

1906.—Grain production of the year: 2,927,416,000 bushels corn, 735,261,000 bushels wheat, 964,905,000 bushels oats, 178,916 bushels barley and 33,375,000 bushels rye.

1906.—Highest wheat, May, 94¢ cents; highest corn, June, 54¢ cents; highest oats, June, 42¢ cents. **Lowest wheat**, August and September, 69¢ cents; lowest corn, February and March, 39 cents; lowest oats, March, 28¢ cents.

1907, January 1st.—United States Department of Agriculture estimate of number of farm animals: 20,968,000 milch cows, 51,566,000 other cattle, 54,794,000 hogs, 53,240,000 sheep, 19,747,000 horses and 3,817,000 mules.



GINGERBREAD MAN—SADDLE GELDING. Winner of six championships, and other prizes in 1911. Owned by T. H. Sonnenburg, St. Louis, Mo. Ridden by Mr. Jno. T. Hook.

1907, January.—Mr. A. C. Van Meter, of Elkhart, Ill., shipped fourteen mules in over the Illinois Traction System. It was the first shipment of the kind over the new road. The load of mules sold at sight to Mr. Adolph Heiman for \$235 each.—From circular of McFarlane Commission Company, St. Louis National Stock Yards.

1907.—Promising new fruits mentioned and illustrated in the Year Book of the United States Department of Agriculture: Delicious apple, Ensay apple, Lambert cherry, Miller persimmon, Ruby persimmon and Sandersha Mango.

1907.—In this year 13,070,963 cases of eggs were the total received at New York, Chicago, Boston, St. Louis, Cincinnati, Milwaukee and San Francisco. Largest of record to date.

1907.—Grain production of the year: 2,592,320,000 bushels corn, 631,087,000 bushels wheat, 754,143,000 bushels oats, 153,597,000 bushels barley, 31,566,000 bushels rye.

1907.—Highest wheat, October, 1.05½¢; highest corn, October, 66½¢ cents; highest oats, September, 56½¢ cents. **Lowest wheat**, January, 71 cents; lowest corn, January, 39½¢ cents; lowest oats, January, 33½¢ cents.

1907, March 1st.—Henry Gill, a veteran horse dealer had eleven loads of domestic horses on sale at the Chicago market in one week. They were all from Iowa.

1907, December.—First National Corn Show. Grand prize for the best ten ears of corn won by Mr. L. B. Clore, of Franklin, Ind., with his exhibit of Johnson County White.



BEST TEN EARS OF CORN exhibited at First National Corn Show at Chicago, 1907. Exhibited by L. B. Clore, of Franklin, Ind.

1907, December.—The National Farmer and Stock Grower, published monthly at St. Louis, Mo., was the first farm paper to offer quantities of **champion seed corn** as subscription premiums. The yellow corn used in the campaign was grown by Mr. D. L. Pascal, of Iowa, and the white corn by Mr. L. B. Clore, of Indiana.

1908, January 1st.—United States Department of Agriculture estimate of number of farm animals: 21,194,000 milch cows, 50,073,000 other cattle, 56,084,000 hogs, 54,631,000 sheep, 19,992,000 horses and 3,869,000 mules.

1908.—Promising new fruits mentioned and illustrated in the Year Book of the United States Department of Agriculture: Patten apple, Bennett apple, Williams apple, Augbert peach, Champion peach, Eaton raspberry, Peter's Mango, Lonestar and Kawakami persimmon.

1908.—Grain production of the year: 2,668,651,000 bushels corn, 664,602,000 bushels wheat, 807,156 bushels oats, 166,756,000 bushels barley and 31,851 bushels rye.

1908.—Highest wheat, May, \$1.11; highest corn, May and September, 82 cents; highest oats, July, 60½¢ cents. **Lowest wheat**, July, 84½¢ cents; lowest corn, December, 56 cents; lowest oats, August, 46 cents.

1909, January 1st.—United States Department of Agriculture estimate of **number of farm animals:** 21,720,000 milch cows, 49,379,000 other cattle, 54,147,000 hogs, 56,084,000 sheep, 20,640,000 horses and 4,053,000 mules.

1909.—Promising new fruits mentioned and illustrated in the Year Book of the United States Department of Agriculture: Mother apple, Coffman apple, Diploma currant, Carrie gooseberry, Winfield raspberry, Victor Roselle or "Jamaica Sorrel."

1909.—Union Stock Yards at Portland, Oregon, opened for business in the month of September. Stock is received both by water and rail.

1909, November 2d.—A ship-load of **Australian meat**, sterilized and chilled by the Linley process, arrived in London after being seventy days in transit. It was chilled at 30 to 31 degrees instead of the usual freezing at 10 to 15 degrees. The shipper was Mr. John Cooke, of Melbourne, Australia.

1909.—Grain production of the year: 2,552,190,000 bushels corn, 653,350,000 bushels wheat and 1,007,129,000 bushels oats, 173,321,000 bushels barley and 29,520,000 bushels rye.

1909.—Highest wheat, June, \$1.60; highest corn, June, 77 cents; highest oats, May, 60½ cents. **Lowest wheat**, August, 39¼ cents; lowest corn, January, 58¼ cents; lowest oats, August, 36½ cents.



GOLDEN GLCW—CHESTNUT SADDLE MARE, 15.2 hands high; daughter of Rex Peavine, a son of Rex McDonald. Sold recently for \$2,100 at Lexington, Ky., to Mr. Chester W. Chapin, of New York City. The price is said to be the highest ever paid for a saddle mare at auction.

1910, January 1st.—United States Department of Agriculture estimate of **number of farm animals:** 21,801,000 milch cows, 47,279,000 other cattle, 47,782,000 hogs, 57,216,000 sheep, 21,040,000 horses and 4,123,000 mules.

1910.—Promising new fruits mentioned and illustrated in the Year Book of the United States Department of Agriculture: Lowry apple, Kinnard apple, Payne peach, Hoosier raspberry, Dugat orange, Family Avocado, Tamopan persimmon and Cecil Mango.

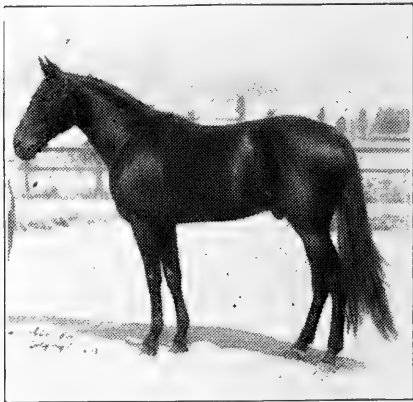
1910, September 22d.—At the age of 85 David Rankin, of Tarkio, Mo., died. Born, May 28th, 1825, in Sullivan county, Indiana. He lived to be the **most notable farmer** of his day and the owner of the largest tracts of rich land. He raised a million bushels of corn on 19,000 acres in one year, but above all he was a stockman, marketing hogs and cattle of his own raising and feeding.

1910.—Grain production of the year: 2,886,260,000 bushels corn, 635,121,000 bushels wheat, 1,186,341,000 bushels oats, 173,832,000 bushels barley, 34,897,000 bushels rye.



MR. R. A. JAMES, of Charleston, Ill., exhibitor of the best ear of corn of the National Corn Exposition of 1910.

1910.—Highest wheat, July, \$1.29½; highest corn, January, 68 cents; highest oats, February, 49 cents. **Lowest wheat**, November, 86½ cents; lowest corn, December, 44¼ cents; lowest oats, October, 29¾ cents.



DAN PATCH, 1:55 — Pacing stallion. Champion harness horse of the world. Owned by Mr. M. W. Savage, of Minneapolis, Minn.

Note by the Editor and Compiler.—Having collected the material for the History of Agriculture by Dates and placed it in pamphlet form we are convinced that the work is a collection of scraps which will require considerable effort to correct and improve. It is, however, an original work, and by printing the subject of each item in bold-faced type there is practically no need of an index. The History of Agriculture by Dates is sold at a fair price for what it is, a foundation work, to be published year after year, and be made better every time.

BOOK DEPARTMENT.

The following books by the best authorities, all standard works, are for sale at the price stated and will be sent by parcel post prepaid on receipt of price. Address all orders to THE HALE PUBLISHING CO., 3550 Vista Ave., St. Louis, Mo.

The American Apple Orchard.

By F. A. Waugh. This work is the result of actual experience and observation of a practical man. It is what everyone interested in apples has been looking for. Of all fruit crops, the apple is not only the most popular, but it is also the most profitable, and in this book chief prominence has been given to modern commercial methods as practiced in large and up-to-date orchards. At the same time the family orchard is not neglected, for special treatment of the subject has been given. Methods are discussed, not for their theoretical value, but from the standpoint of cash profits. Anyone interested in apples will find this a valuable and helpful guide. Illustrated. 5x7 inches. 226 pages. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

American Cattle Doctor.

By George H. Dadd, V. S. A complete work on all the diseases of cattle, sheep and swine, including every disease peculiar to America, and embracing all the latest information on the cattle plague and trichina; containing also a guide to symptoms, a table of weights and measures, and a list of valuable medicines. Illustrated. 367 pages. 6x9 inches. Bound in cloth, by mail, postpaid, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

American Fruit Culturist.

By John J. Thomas. Containing practical directions for the propagation and culture of all the fruits adapted to the United States. Twentieth thoroughly revised and greatly enlarged edition by Wm. H. S. Wood. This new edition makes the work practically almost a new book, containing everything pertaining to large and small fruits as well as subtropical and tropical fruits. Richly illustrated by nearly 800 engravings. 758 pages. 12mo. Price, \$2.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

American Grape Growing and Wine Making.

By George Husmann. New and

enlarged edition. With contributions from well-known grape growers, giving wide range of experience. The author of this book is a recognized authority on the subject. Illustrated. 269 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The American Peach Orchard.

By F. A. Waugh. This book is intended to be of service to the beginner as well as the commercial grower of peaches. An idea of the scope and completeness of the book may be had by noting the following subjects, each of which has been treated in a separate chapter: Peach-growing Geography, Climatology, Soils and Exposures, How to Get the Trees, Orchard Planting, General Management, Cover Crops, the Use of Fertilizers, Pruning and Renovation, Insect Enemies, Diseases of Tree and Fruit, Spraying, Marketing the Crop, the Family Orchard, Botanical and Pomological Status, Choosing Varieties, Variety Catalogue, the Nectarine, Utilizing the Fruit, Historical Sketch. To anyone who wants to know the latest on peach culture, this book will be worth many times its cost. Fully illustrated. 5x7 inches. 275 pages. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Animal Breeding.

By Thomas Shaw. This is the first book which has systematized the subject of animal breeding. The leading laws which govern this most intricate question the author has boldly defined and authoritatively arranged. The chapters on the more involved features of the subject, as sex and the relative influence of parents, should go far toward setting at rest the widely speculative views cherished with reference to these questions. Illustrated. 405 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Barn Plans and Outbuildings.

This book contains chapters on the economic erection and use of barns, grain barns, horse barns, cattle barns, sheep barns, corn houses,

smoke houses, ice houses, pig pens, granaries, etc. There are likewise chapters upon bird houses, dog houses, tool sheds, ventilators, roofs and roofing, doors and fastenings, workshops, poultry houses, manure sheds, barnyards, root pits, etc. 235 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Clovers, and How to Grow Them.

By Thomas Shaw. This is the first book published which treats on the growth, cultivation and treatment of clovers as applicable to all parts of the United States and Canada, and which takes up the entire subject in a systematic way and consecutive sequence. The importance of clover in the economy of the farm is so great that an exhaustive work on this subject will, no doubt, be welcomed by students in agriculture as well as by all who are interested in the tilling of the soil. Illustrated. 5x7 inches. 337 pages. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Coburn's Swine Husbandry.

By F. D. Coburn. New, revised and enlarged edition. The breeding, rearing and management of swine, and the prevention and treatment of their diseases. It is the fullest and freshest compendium relating to swine breeding yet offered. Illustrated. 312 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Cranberry Culture.

By Joseph J. White. Contents: Natural history, history of cultivation, choice of location, preparing the ground, planting the vines, management of meadows, flooding, enemies and difficulties overcome, picking, keeping, profit and loss. Illustrated. 132 pages. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Dadd's American Reformed Horse Book.

By George H. Dadd, V. S. A treatise on the causes, symptoms and cure of every disease incident to the horse, including all diseases peculiar to America, and which are not treated of in the works based upon the works of Youatt, Mason and others. Embracing also full details of breeding, rearing and management on the reform system of practice. Illustrated. 442 pages. 6x9 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Dairyman's Manual.

By Henry Stewart, author of "The Shepherd's Manual," "Irrigation," etc. A useful and practical work by a writer who is well known as thoroughly familiar with the subject of which he writes. Illustrated. 475 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Arithmetic.

By Charles W. Burkett, formerly Professor of Agriculture in the New Hampshire College of Agriculture, and Karl D. Swartzel, Professor of Mathematics, Ohio State University. For the first time in book making a real farm arithmetic has been thought out, developed and printed. This book applies to the everyday life of the farm boy and girl and is designed for a basic study in every school and in every rural community. It supplies new, accurate, useful and interesting problems for practice, drill and review. It will tend to develop in the mind of the pupil an appreciation of and an insight into the quantitative side of farm life. 280 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Soil and Crops of the Farm.

By George E. Morrow, M. A., and Thomas F. Hunt. The methods of making available the plant food in the soil are described in popular language. A short history of each of the farm crops is accompanied by a discussion of its culture. The useful discoveries of science are explained as applied in the most approved methods of culture. Illustrated. 310 pages. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Beginner's Guide to Fruit Growing.

By F. A. Waugh. The great majority of books are written for the professional farmer or fruit grower, for the one who has spent his life on the soil and who already knows all the simple facts. Yet these simplest things—the most necessary to success—are just the thing that the genuine beginner does not know. The need of such a beginners' book is, no doubt, more urgent in the field of fruit growing than anywhere else, and the reason that this line of work appeals especially to people removing from the city to country. Illustrated. 5x7 inches. 120 pages. Cloth. Price, 75 cents. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Book of Corn.

By Herbert Myrick, assisted by A. D. Shamel, E. A. Burnett, Albert W. Fulton, B. W. Snow and other capable specialists. A complete treatise upon the culture, marketing and uses of maize in America and elsewhere, for farmers, dealers and others. Illustrated. Upwards of 500 pages. 5x7 inches. Cloth. Price by mail, prepaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Book of Wheat.

By P. T. Dondlinger. This book comprises a complete study of everything pertaining to wheat. It is the work of a student of economic as well as agricultural conditions, well fitted by the broad experience in both practical and theoretical lines to tell the whole story in a condensed form. It is designed for the farmer, the teacher and the student as well, and the bibliography which accompanies the book alone is worth many times its price to the investigator of any subject connected with the culture of wheat. Illustrated. 5½x8 inches. 370 pages. Cloth. Price, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Business of Dairying.

By C. B. Lane. The author of this practical little book is to be congratulated on the successful manner in which he has treated so important a subject. It has been prepared for the use of dairy students, producers and handlers of milk and all who make dairying a business. Its purpose is to present in a clear and concise manner various business methods and systems which will help the dairyman to reap greater profits. This book meets the needs of the average dairy farmer, and if carefully followed will lead to successful dairying. Illustrated. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Crops.

By Charles William Burkett. This volume abounds in helpful suggestions and valuable information for the most successful growing of the various farm crops, whether large or small areas are allotted to them, and it is a plain, practical and reliable guide and tells of the best ways of handling crops from the time the land is made ready until the harvest product is sold. Contents: Good Soils Back of Good Crops, How Rotations Help Out; Crop Yields and Proper Culture; Wheat Crops For Stock Feeding; The Silo, Silage and Soiling

Crop; Every Farmer a Plant Breeder; and Farm Crops. Illustrated, 5x7 inches. 288 pages. Cloth. By mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Gardening For Pleasure.

By Peter Henderson. A guide to the amateur in the fruit, vegetable and flower garden, with full descriptions for the greenhouse, conservatory and window garden. It meets the wants of all classes in country, city and village, who keep a garden for their own enjoyment rather than for the sale of products. Finely illustrated. 404 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Landscape Beautiful.

By F. A. Waugh. In these seventeen chapters, or essays, as the author calls them, he presents a delightful study of the landscape in all its phases—historical, poetic, literary, artistic, practical, landscape gardening, etc. All written in a most sympathetic and fascinating style. It will make a highly appropriate gift book. It is printed from large, clear type, on specially made, deckle-edged, woven paper, the illustrations on coated paper in soft tones, gilt top, modern art binding. 336 pages. Size, 6¼x8¼ inches. Price, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Land Draining.

By Manly Miles. A book for farmers on the principles and practice of draining, giving the results of his extended experience in laying tile drains. The directions for the laying out and the construction of tile drains will enable the farmer to avoid the errors of imperfect construction and the disappointment that must necessarily follow. Illustrated. 200 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Market Gardening and Farm Notes.

By Burnett Landreth. Experiences and observations for both North and South, of interest to the amateur gardener, trucker and farmer. A novel feature is the calendar of farm and garden operations for each month; the chapters on fertilizers, transplanting, succession and rotation of crops, the packing, shipping and marketing of vegetables will be especially useful to market gardeners. Illustrated. 315 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Making Poultry Pay.

By Edwin C. Powell. A manual of practical information on poultry keeping. It tells what to do, why to do it, and how to do it. Illustrated. 324 pages. 5x6½ inches. Bound in cloth. Price, \$1.00, by mail, postpaid. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Management and Breeding of Horses.

By M. W. Harper. In this volume the entire subject of judging, feeding, breeding, care and management as well as the history and description of each of the breeds of horses is presented in a most practical manner. The book is illustrated with many cuts of the best types of horses and the most approved methods of handling them. An attempt has been made to arrange the subject so that the book may be used as a text as well as a practical guide for the farmer and horse breeder. Illustrated. 5½x8 inches. 466 pages. Cloth. Price, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Management and Feeding of Cattle.

By Prof. Thomas Shaw. The place for this book will be at once apparent when it is stated that it is the first book that has ever been written which discusses the management and feeding of cattle, from the birth of the calf until it has fulfilled its mission in life, whether on the block or at the pail. The book is handsomely printed on fine paper, from large, clear type. Fully illustrated. 5½x8 inches. 496 pages. Bound in cloth, by mail, postpaid, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Modern House Plans For Everybody.

By S. B. Reed. This useful volume meets the wants of persons of moderate means, and gives a wide range of designs, from a dwelling costing \$250 up to \$8,000, and adapted to farm, village or town residences. Nearly all of these plans have been tested by practical working. Profusely illustrated. 243 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The New Egg Farm.

By H. H. Stoddard. A practical, reliable manual upon producing eggs and poultry for market as a profitable business enterprise, either by itself or connected with other branches of agriculture. It tells all about how to feed and manage; how

to breed and select incubators and brooders; its labor-saving devices, etc. 140 original illustrations. 331 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Nut Culturist.

By Andrew S. Fuller. A treatise on the propagation, planting and cultivation of nut-bearing trees and shrubs adapted to the climate of the United States, with the scientific and common names of the fruits known in commerce as edible or otherwise useful nuts. Illustrated. 290 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Peach Culture.

By Hon. J. Alexander Fulton. The best work on peach growing. It has been thoroughly revised and a large portion of it rewritten, bringing it down to date. Illustrated. 204 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Quimby's New Beekeeping.

By L. C. Root. The mysteries of beekeeping explained. Combining result of fifty-years' experience with the latest discoveries and inventions and presenting the most approved methods, forming a complete work. Illustrated. 271 pages. 5x7 inches. Cloth. Price, postpaid, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Insects and Insecticides.

A book by Clarence M. Weed, D.Sc., Professor of Entomology and Zoology, New Hampshire College of Agriculture. A practical manual concerning noxious insects and methods of preventing their injuries. 334 pages, with many illustrations. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Fumigation Methods.

By Willis G. Johnson. A timely, up-to-date book on the practical application of the new methods for destroying insects with hydrocyanic acid gas and carbon bisulphide, the most powerful insecticides ever discovered. It is an indispensable book for farmers, fruit growers, nurserymen, gardeners, florists, millers, grain dealers, transportation companies, college and Experiment Station workers, etc. Illustrated. 313 pages. 5x7 inches. Cloth-bound. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Grape Culturist.

By A. S. Fuller. This is one of the very best of works upon the culture of the hardy grapes, with full directions for all departments of propagation, culture, etc. With 150 excellent engravings, illustrating planting, training, grafting, etc. 282 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Greenhouse Construction.

By L. R. Taft. A complete treatise on greenhouse structures and arrangements of the various forms and styles of plant houses, for professional florists as well as amateurs. All the best and most improved structures are clearly described. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receives appropriate attention. Over 210 pages. 5x7 inches. Nicely bound in cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Greenhouse Management.

By L. R. Taft. This book forms an almost indispensable companion volume to "Greenhouse Construction." So minute and practical are the various systems and methods of growing and forcing roses, violets, carnations and all the most important florists' plants, as well as fruits and vegetables, described, that by a careful study of this work and the following of its teachings, failure is almost impossible. Illustrated. 328 pages. 5x7 inches. Nicely bound in cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Guenon's Treatise on Milch Cows.

By Thomas J. Hand, Secretary of the American Jersey Cattle Club. A treatise on the bovine species in general. An entirely new translation of the last edition of this popular and instructive book. With over 100 illustrations, especially engraved for this work. 131 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Handy Farm Devices and How to Make Them.

By R. Cobleigh. This book contains directions for making things for almost every conceivable farm purpose, including appliances for the care of horses, cattle, sheep, hogs, poultry and bees; gates, fences, ap-

pliances for the garden, orchard, woods, house, barns and outbuildings. In every instance there is a clear, complete description with illustrations. 5x7 inches. 288 pages. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Harris on the Pig.

By Joseph Harris. The points of the various English and American breeds are thoroughly discussed, and the great advantage of using thoroughbred males clearly shown. The work is equally valuable to the farmer who keeps but few pigs and to the breeder on an extensive scale. Illustrated. 318 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Herbert's Hints to Horse Keepers.

By the late Henry William Herbert (Frank Forrester). This is one of the best and most popular works on the horse prepared in this country. A complete manual for horsemen, embracing: How to breed a horse; how to buy a horse; how to break a horse; how to use a horse; how to feed a horse; how to physic a horse (allopathy or homoeopathy); how to groom a horse; how to drive a horse; how to ride a horse, etc. Beautifully illustrated. 425 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Homes For Home Builders.

Edited and arranged by W. D. King, architect, of New York. Farm and village house plans, also plans of barns, stables, poultry houses, etc., in great variety. 251 pages. 5x7 inches. Bound in cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Soiling Crops and the Silo.

By Thomas Shaw, Professor of Animal Husbandry at the University of Minnesota. How to cultivate and harvest crops; how to build and fill a silo; how to use silage. The newest and most valuable of all books for the dairyman. It tells all about growing and feeding all kinds of soiling crops that have been found useful in any part of the United States or Canada—climate and soil to which they are adapted, rotation, sowing, cultivating and feeding. Also about building and filling silos, what to use and how to fill and feed it. Illustrated. 364 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Development.

By Willet M. Hays. It takes up farming as a vocation, tells about the geological history of the earth, explains the way soil is made, describes the manner of selecting a farm home, how to subdue the land, how to drain and irrigate, and how to build roads, bridges and fences. The author is one of our leading agricultural educators and has been a foremost worker in introducing agriculture in the common schools. Profusely illustrated. $5\frac{1}{2} \times 8$ inches. 322 pages. Cloth. By mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Machinery and Farm Motors.

By J. B. Davidson and L. W. Chase. Farm Machinery and Farm Motors is the first American book published on the subject of Farm Machinery since that written by J. J. Thomas in 1867. This was before the development of many of the more important farm machines and the general application of power to the work of the farm. Modern farm machinery is indispensable in present-day farming operations, and a practical book like Farm Machinery and Farm Motors will fill a much-felt need. Although written primarily as a text-book, it is equally useful for the practical farmer. Profusely illustrated. $5\frac{1}{2} \times 8$ inches. 520 pages. Handsomely bound in cloth. Price, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Saddle Horse.

A complete guide for riding and training. This is a complete and reliable guide book for all who desire to acquire the accomplishment of horsemanship and who wish to teach their animals how to perform various feats under the saddle. Illustrated. 5×7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Manures.

By Chas. E. Thorne. This is the most complete and exhaustive work of the kind ever published on the production and handling of animal manures. It tells in concise form the essential things that every farmer and tiller of the soil should know. A plain, practical account of the effects of various kinds of manures on the soil and the composition of farm crops and of the effect of different fertilizing elements on their growth. The book will not only interest practical farmers, but intending farmers who feel the call

to go on the land and grow crops. Illustrated. 5×7 inches. 300 pages. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Talks on Manures.

By Joseph Harris, M. S. A series of familiar and practical talks between the author and the deacon, the doctor and other neighbors, on the whole subject of manures and fertilizers, including a chapter especially written for it by Sir John Bennet Lawes, of Rothamsted, England. 366 pages. 5×7 inches. Cloth-bound. Price, by mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Turkeys, and How to Grow Them.

Edited by Herbert Myrick. A treatise on the natural history of turkeys; the various breeds and the best methods to insure success in the business of turkey growing. Illustrated. 154 pages. 5×7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Gardening For Profit.

By Peter Henderson. The standard work on market and family gardening. The successful experience of the author for more than thirty years, and his willingness to tell, as he does in this work, the secret of his success for the benefit of others, enables him to give most valuable information. The book is profusely illustrated. 376 pages. 5×7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Stock.

By C. W. Burkett. There are few men in the country better qualified to write on this subject than Professor Burkett, late Director of the Kansas Experiment Station, and now editor of the American Agriculturist. The writer handles, in a brief, yet practical and thorough manner, the breeding and feeding, care and management, of all classes of farm stock. The chapters on beef, mutton and pork making show how the small breeder can make money. For the average farmer there is no book on farm stock just like it. Written in a simple, straightforward way, with all technical terms and expressions fully explained, it is designed for the average farmer, yet the largest breeder can profit by using it as a guide. Fully illustrated. $5 \times 7\frac{1}{2}$ inches. 350 pages. Bound in cloth. By mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Forage and Fiber Crops in America.

By Thomas F. Hunt. This book is exactly what its title indicates. It is indispensable to the farmer, student and teacher who wishes all the latest and most important information on the subject of forage and fiber crops. Like its famous companion, "The Cereals in America," by the same author, it treats of the cultivation and improvement of every one of the forage and fiber crops. With this book in hand you have the latest and most up-to-date information available. Illustrated. 428 pages. $5\frac{1}{2} \times 8$ inches. Bound in cloth. Price, postpaid, \$1.75. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Forage Crops Other Than Grasses.

How to Cultivate and Use Them. By Thomas Shaw. Soon forage crops other than grasses will be grown from sea to sea. This new departure may revolutionize the stock and dairy business of America. Professor Shaw's book tells all about it—just what has been done, how it was done and how any and every farmer can do likewise. Scientifically accurate, the book is intensely practical. Illustrated. 287 pages. 5×7 inches. By mail, postpaid, \$1.00. Hale Publishing Co., St. Louis, Mo.

Forest Planting.

By H. Nicholas Jarchow, LL.D. A treatise on the care of woodlands and the restoration of the denuded timber lands on plains and mountains, full instructions being given for forest planting of our various kinds of soil and subsoil. Illustrated. 250 pages. 5×7 inches. Cloth-bound. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Horse; How to Buy and Sell.

By Peter Howden. Giving the points which distinguish a sound from an unsound horse. This volume abounds in general information, stated in so clear and simple a manner as to enable anyone to intelligently buy and sell a horse. 131 pages. 5×7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

How Crops Feed.

By Prof. Samuel W. Johnson. A treatise on the atmosphere and the soil, as related in the nutrition of agricultural plants. The volume—the companion and complement to "How Crops Grow"—has been welcomed by those who appreciate the scientific aspect of agriculture. Illustrated. 376 pages. 5×7 inches.

Cloth. By mail, postpaid. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

How Crops Grow.

By Prof. Samuel W. Johnson. A treatise on the chemical composition, structure and life of the plant. A guide to the knowledge of agricultural plants, their composition, their structure and models of development and growth; of the complex organization of plants, and the use of the parts; the germination of seeds, and the food of plants obtained both from the air and the soil. Illustrated. 416 pages. 5×7 inches. Cloth-bound, by mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Ice Crop.

A book by Theron L. Hiles. How to harvest, ship and use ice. A complete, practical treatise for farmers, dairymen, ice dealers, produce shippers, meat packers, cold storers, and all interested in ice houses, cold storage and the handling or use of ice in any way. Including many recipes for iced dishes and beverages. The book is illustrated by cuts of the tools and machinery used in cutting and storing ice, and the different forms of ice houses and cold storage buildings. Illustrated. 122 pages. 5×7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Insects Injurious to Vegetables.

A book by F. H. Chittenden, S.C.D. A complete, practical work, giving descriptions of the most important insects attacking vegetables of all kinds, with simple and inexpensive remedies to check and destroy them, together with timely suggestions to prevent their recurrence. Profusely illustrated. $5\frac{1}{2} \times 8$ inches. 300 pages. Cloth. By mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Fruit Harvesting, Storing, Marketing.

By F. A. Waugh. A practical guide to the picking, storing, shipping and marketing of fruit. The principal subjects covered are the fruit market, fruit picking, sorting and packing, fruit storage, evaporating, canning, statistics of the fruit-trade, fruit package laws, commission dealers and dealing, cold storage, etc. No progressive fruit grower can afford to be without this most valuable book. Illustrated. 232 pages. 5×7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Swine in America.

By F. D. Coburn. This great book on hog raising is a guide to every grower and a text-book to every student. What he had already done for alfalfa, Mr. Coburn now has done for swine. This great industry is treated in his new work, "Swine in America," in a most exhaustive manner. Every phase of hog raising is considered from a practical standpoint, and the latest contributions to the science and art of handling and managing hogs weighed and discussed in this important work down to the hour of publication. If you have anything at all to do with hogs, get this book. This book contains 650 pages, 6x9 inches, bound in fine silk cloth, gold stamping, making it one of the handsomest and most attractive agricultural books now before the public. Price, \$2.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

First Principles of Feeding Farm Animals.

By C. W. Burkett. As indicated in its title, the book discusses the fundamental and first principles of feeding the animals of the farm. It is of simple construction, takes up the subject step by step, making it possible for the practical man or student to understand clearly and fully both the science and the practice of this important subject. Illustrated. 348 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Vegetable Gardening.

By R. L. Watts. This complete, concise and authentic book covers every phase of vegetable gardening and is especially well organized as a text-book and equally valuable as a handbook for practical growers. It treats fully the questions regarding soils, fertilizers, manures, irrigation, insect enemies and fungous diseases, construction of hot-houses, cold-frames, seed growing, vegetables under glass, marketing, etc. Illustrated 5½x8 inches. 525 pages. Cloth. Price, \$1.75. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Farmer's Veterinarian.

By Charles William Burkett. This book abounds in helpful suggestions and valuable information for the most successful treatment of ills and accidents, and disease troubles. A practical treatise on the diseases of farm stock, containing brief and popular advice on the nature, cause and treatment of disease, the common ailments and the care and

management of stock when sick. It is profusely illustrated, containing a number of half-tone insert illustrations and a great many drawings picturing diseases, their symptoms and familiar attitudes assumed by farm animals when affected with disease, and presents, for the first time, a plain, practical and satisfactory guide for farmers who are interested in the common diseases of the farm. Illustrated. 5x7 inches. 288 pages. Bound in cloth, by mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Plums and Plum Culture.

By Prof. F. A. Waugh. A complete manual on all known varieties of plums and their successful management. Plum culture is one of the most complicated of fruit specialties, and Professor Waugh is one of the best known of the specialists, and this work represents in an unusual degree the original discoveries of the author. Nevertheless, the discoveries and practical experience of others have not been disregarded. The book will be found indispensable to the scientist, to the nurseryman and to the cultivator. Illustrated. 391 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Study of Breeds.

By Thomas Shaw. Origin, history, distribution, characteristics, adaptability, uses and standards of excellence of all pedigreed breeds of cattle, sheep and swine in America. The accepted text-book in colleges and the authority for farmers and breeders. Illustrated. 371 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Potato.

By Samuel Fraser. While the practical side of potato culture has been emphasized, the scientific part has not been neglected, and the information given is of value, both to the grower and the student. It is the most complete, reliable and authoritative book on the potato ever published in America. Illustrated. 200 pages. 5x7 inches. Cloth-bound, postpaid, 75 cents. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Soil of the Farm.

By John Scott and J. C. Morton. A handbook of the processes included in the management and cultivating of the soil. 107 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Cereals in America.

By Thomas F. Hunt, M. S., D. Agri., Professor of Agronomy, Cornell University. If you raise five acres of any kind of grain you cannot afford to be without this book. It is in every way the best book on the subject that has ever been written. It treats of the cultivation and improvement of every grain crop raised in America in a thoroughly practical and accurate manner. The subject matter includes a comprehensive and succinct treatise of wheat, maize, oats, barley, rye, rice, sorghum (Kaffir corn) and buckwheat, as related particularly to American conditions. Illustrated. 450 pages. 5½x8 inches. Cloth. Price, \$1.75 by mail, postpaid. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Practical Floriculture.

By Peter Henderson. A guide to the successful propagation and cultivation of florists' plants. The work is not for florists and gardeners only, but the amateur's wants are constantly kept in mind. It also comprises a very complete treatise on the cultivation of flowers under glass, or in the open air, suited to those who grow flowers for pleasure as well as those who make them a matter of trade. Illustrated. 325 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Profitable Poultry Production.

By M. G. Kains. This book shows how poultry can be made more profitable. From cover to cover the book is written with the one aim of aiding the poultry raiser to make the most money from the farm flocks; hence special emphasis is laid on marketing both poultry and eggs as well as on breeding and feeding. Illustrated. 5x7 inches. 288 pages. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Weeds of the Farm and Garden.

By L. H. Pammel. The enormous losses amounting to several hundred million dollars annually in the United States caused by weeds stimulate us to adopt a better system of agriculture. The weed question is, therefore, a most important and vital one for American farmers. This treatise will enable the farmer to treat his field to remove weeds. The book is profusely illustrated by photographs and drawings made expressly for this work and will prove invaluable to every farmer, land owner, gardener and park superin-

tendent. 5x7 inches. 300 pages. Cloth. Price, by mail, postpaid, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Profitable Stock Raising.

By Clarence A. Shamel. This book covers fully the principles of breeding and feeding for both fat stock and dairying type. It tells of sheep and mutton raising, hot-house lambs, the swine industry and the horse market. Finally he tells of the preparation of stock for the market and how to prepare it so that it will bring a high market price. Illustrated. 5x7 inches. 288 pages. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Book of Alfalfa.

History, Cultivation and Merits. Its Uses as a Forage and Fertilizer. The appearance of the Hon. F. D. Coburn's little book on Alfalfa a few years ago has been a profit revelation to thousands of farmers throughout the country, and the increasing demand for still more information on the subject has induced the author to prepare the present volume, which is, by far, the most authoritative, complete and valuable work on this forage crop published anywhere. Illustrated. 336 pages. 6½x9 inches. Cloth. Price by mail, postpaid, \$2.00. Hale Publishing Co., 3550 Ave., St. Louis, Mo.

Foundations of American Grape Culture.

By T. V. Munson. This book is original, clear and practical, besides being the most accurately scientific, clear and practical work upon American grapes, suited to all sections of the country. It will be a fine money maker to every practical vineyardist who reads it, and a delight and helpmate to every home that grows a few vines about the house, on the trees, on walls or arbors, or garden trellis. Illustrated. 7½x10 inches. 250 pages. Cloth. Price, \$2.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Play and Profit in My Garden.

By E. P. Roe. The author takes us to his garden on the rocky hillside, and shows us how out of it, after four-years' experience, he evoked a profit of \$1,000, and this while carrying on pastoral and literary labor. Illustrated. 350 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Fruit Garden.

By P. Barry. A standard work on fruit and fruit trees, the author having had over thirty-years' practical experience at the head of one of the largest nurseries in this country. Invaluable to all fruit growers. Illustrated. 516 pages. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Profits in Poultry.

Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. 352 pages. 5x7 inches. Bound in cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

The Science and Practice of Cheesemaking.

By L. L. Van Slyke and C. A. Publow. A treatise on the manufacture of American cheddar cheese and some other varieties; intended as a text-book for the use of dairy teachers and students in class-room and work-room; prepared also as a handbook and work for reference for the daily use of practical cheesemakers and cheese-factory operations. This is a work which represents both the scientific and practical sides of cheesemaking and which, in respect to authorship, has been prepared under unusually favorable auspices. Illustrated. 5x7 inches. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Systematic Pomology.

By F. A. Waugh, Professor of Horticulture and Landscape Gardening in the Massachusetts Agricultural College, formerly of the University of Vermont. This is the first book in the English language which has ever made the attempt at a complete and comprehensive treatment of systematic pomology. It presents clearly and in detail the whole method by which fruits are studied. The book is suitably illustrated. 288 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Farm Drainage.

By Judge French, of New Hampshire. The principles, process and efforts of draining land with stones, wood, ditch-plows, open ditches, and especially with tiles; including tables of rainfall, evaporation, filtra-

tion, excavation, capacity of pipes, cost and number to the acre. 384 pages. 5x7 inches. Cloth, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Making Horticulture Pay.

By M. G. Kains. This book contains a simple, concise but adequate discussion of soils and their care, fertilizers and fertilizing, water and its control, and the function of cultivation. Then follows a discussion of fruit plantations and their care, the various orchard fruits of temperate North America, and the small fruits of this region. The vegetable garden is treated generally, and then the various vegetables are taken up individually. After a general chapter on spraying, the volume closes with a chapter on ornamentals for the home grounds, gardens, the house and the greenhouse. Illustrated. 5x7 inches. 288 pages. Cloth. Price, \$1.50. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Small Fruit Culturist.

By Andrew S. Fuller. The book covers the whole ground of propagating small fruits, their culture, varieties, packing for market, etc. It is very finely and thoroughly illustrated, and makes an admirable companion to "The Grape Culturist." 298 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Pear Culture For Profit.

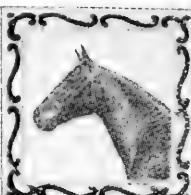
By P. T. Quinn, Practical Horticulturist. Teaching how to raise pears intelligently, and with the best results, how to find out the character of the soil, the best methods of preparing it, the best varieties to select under existing conditions, the best modes of planting, pruning, fertilizing, grafting and utilizing the ground before the trees come into bearing, and, finally, of gathering and packing for market. Illustrated. 136 pages. 5x7 inches. Cloth. Price, \$1.00. Hale Publishing Co., 3550 Vista Ave., St. Louis, Mo.

Cider Maker's Handbook.

By J. M. Trowbridge. Contents: The properties of cider apple juice; apples, varieties and tests; apparatus for making cider; pasteurization; old method of cider making. It is a complete guide for the cider maker on a large or small scale. Illustrated. 119 pages. 5x7 inches. Bound in cloth. Sent prepaid for \$1.00. Hale Publishing Co., 3550 Ave., St. Louis, Mo.



National FARMER



Vol. XXXIII.

St. Louis, Mo., June, 1915

No. 6



FAIR STAFF, 23—CHAMPION SHORTHORN COW AT IOWA AND OTHER STATE SHOWS. This magnificent cow shows the possibilities of the Shorthorn as beef cattle. At this time, when the best offerings in the market are selling at ten cents a pound, every effort should be made on the part of stock farmers to grow fat and fatness cattle that make perfect beefers, as does the Shorthorn. Too much cannot be said on this subject. It applies to all the beef breeds. Such steers that would now sell at one hundred and twenty dollars a head have many times sold for less than half that money.



PUBLIC SCHOOL TEACHERS at one of our schools, are invited to teach it in our public schools. The picture shows the earnest interest that is displayed in the subject.



and Stock GROWER



50 Cents a Year Published Monthly by The Hale Publishing Co.

THE NATIONAL FARMER AND STOCK GROWER

Is a nice, clean, general farm publication, full of practical, interesting and instructive information. It contains good reading for all the family. It is very useful to general farmers, to vegetable and fruit growers, and especially so to cattle, hog and sheep raisers and feeders, to horse and mule raisers and dealers, and it contains more good poultry facts than most of the poultry papers. The best live stock illustrations appear in THE NATIONAL FARMER AND STOCK GROWER. There are thirty-two pages, four columns to the page. It is published monthly.

Send us Fifty Cents and we will send you THE NATIONAL FARMER AND STOCK GROWER for one year, and we will also send you a copy of HALE'S HISTORY OF AGRICULTURE BY DATES.

THE HALE PUBLISHING CO., 3550 Vista Ave., ST. LOUIS, MO.

The **Book of** **LIVE STOCK CHAMPIONS.** **EDITION OF 1912.**

NOW READY FOR DELIVERY.

True to Life Pictures Reproduced From Photographs Taken in the
Principal Show Rings of the American Continent by
the Greatest Animal Artists.

One Thousand Champions,

**Winners in Annual Live Stock Contests at State and National Fairs
and Expositions.**

THIS is a new edition of the most valuable book ever published in the interest of high-class stock raising. The pictures in THE BOOK OF LIVE STOCK CHAMPIONS are of famous animals. There are sweepstakes and championship winners at State, National and International Fairs and Expositions. These include individual awards in breeders' competitions, also herds with prize-ring honors; the beef cattle include grand champion steers and car-loads; the dairy cattle include record makers and large producers of milk and butter; the horses include thoroughbred, trotting, coach, draft, hunters, ponies, jack stock, etc. Hogs, sheep and goats are represented by the best in every breed. The book is elegantly bound in blue cloth, 352 pages, with nearly 750 separate and distinct illustrations, one, two, five or more champions to the page.

There is not a second-class animal or inferior picture in the book. Every animal is a record-maker, record-breaker, famous sire, mother of champions, or winner in the prize ring.

Issued as a Souvenir Supplement.

THE BOOK OF LIVE STOCK CHAMPIONS is published as a Souvenir Supplement to THE NATIONAL FARMER AND STOCK GROWER, issued monthly at St. Louis, Mo., a splendid, clean, general farm publication, full of practical, interesting and instructive information. It contains good reading for all the family. It is very useful to general farmers, vegetable and fruit growers, and especially so to cattle, hog and sheep raisers and feeders, horse and mule raisers and dealers, and it contains more good poultry facts than most of the poultry papers. There are thirty-two pages, four columns to the page.

Special Inducements. **AN EXTRAORDINARY OFFER.**

We offer the first ten thousand copies of this edition at One Dollar per copy, including a two-year subscription to THE NATIONAL FARMER AND STOCK GROWER. The first ten thousand copies are handsomely printed on coated paper and elegantly bound in blue cloth, with gilt title. No finer volume was ever offered. Send One Dollar with your order to

THE HALE PUBLISHING CO., 3550 Vista Ave., St. Louis, Mo.



... G R E A T E S T ...

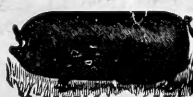
Subscription Proposition.

Co-operative Clubbing Arrangement.

Four Great Papers . .
For One Year
For Only One Dollar.

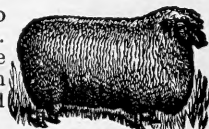
FOUR STERLING, UP-TO-DATE
SPECIAL FARM PAPERS.

THE NATIONAL FARMER AND STOCK GROWER—issued monthly—a magnificent guide and counsellor in all branches of farming, grain growing, fruit growing, dairying, stock raising and feeding, markets, etc.



THE AMERICAN SWINEHERD—issued monthly—a leader in its class. The hog paper, the pig paper, the brood-sow paper and strictly first-class in teaching how to top the market by producing top hogs.

THE SHEPHERDS' JOURNAL is devoted to sheep husbandry on the farm and on the range. It is equally valuable for the breeder as for the herdsman. It is issued monthly, printed on elegant paper, splendidly illustrated and edited by practical men.



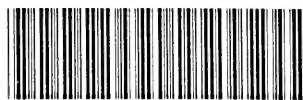
THE RELIABLE POULTRY JOURNAL—the largest, best and most elegant poultry journal issued in the United States. Great on breeding points, and splendid articles on raising, feeding and shipping poultry. THE RELIABLE POULTRY JOURNAL is distinctly practical in all articles. The writers are thoroughly expert in their particular branches of Poultry Husbandry and retain the peculiar quality of being good instructors. You gain something every time you read THE RELIABLE POULTRY JOURNAL.

The four papers above mentioned ought to be on every farm and ranch. Taken singly they cost \$2.00 a year. By our co-operative clubbing arrangement we are enabled to offer all four papers one year for One Dollar. Address us at once without fail.

THE HALE PUBLISHING CO., 3550 Vista Ave., St. Louis, Mo.



LIBRARY OF CONGRESS



0 003 154 727 1

Hollinger Corp.
pH 8.5